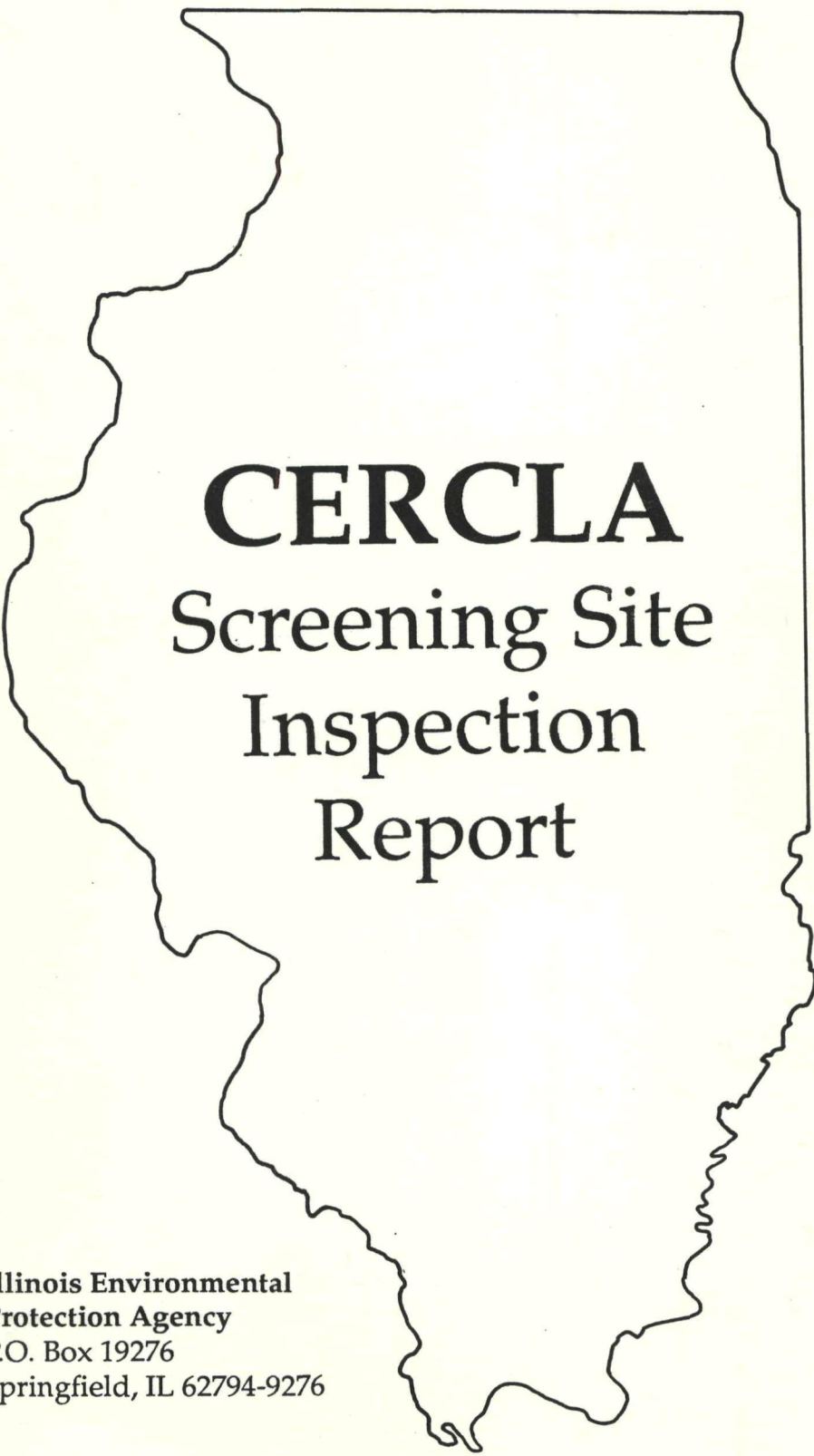


US EPA RECORDS CENTER REGION 5



448870

L0316280023--Cook County  
Pullman Sewage Farm  
ILD981959208  
SF/HRS

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# **CERCLA**

## **Screening Site Inspection Report**



**Illinois Environmental  
Protection Agency**  
P.O. Box 19276  
Springfield, IL 62794-9276

*Confidential Material May be Enclosed*

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## 1. INTRODUCTION

On February 13, 1990, the Illinois Environmental Protection Agency's Pre-Remedial Unit was tasked by the United States Environmental Protection Agency (U.S.EPA) to conduct a CERCLA screening site inspection of the Pullman Sewage Farm in Chicago, Illinois.

The site was originally added to CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) by the U.S.EPA in June of 1987. The site received its initial CERCLA evaluation in the form of a Preliminary Assessment (PA) that was completed by Richard Lange of the Illinois EPA and submitted to the Region V offices of U.S.EPA on July 20, 1987. In April of 1990, the Illinois Environmental Protection Agency Pre-Remedial Unit prepared a screening site inspection (SSI) work plan for the Pullman Sewage Farm that was subsequently approved by U.S.EPA. The formal Screening Site Inspection was conducted on May 16 and May 17, 1990. During this inspection, representatives of the Illinois EPA collected a total of twenty soil samples.

The purposes of an SSI have been stated by U.S.EPA in a directive outlining Pre-Remedial program strategies. The directive states:

All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL

[National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these site, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act]... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.

The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred by another authority will receive a listing SI (U.S.EPA 1988).

U.S.EPA Region V has also instructed IEPA to identify sites during the SSI that may require removal action to remediate an immediate human health and/or environmental threat.

## 2. SITE BACKGROUND

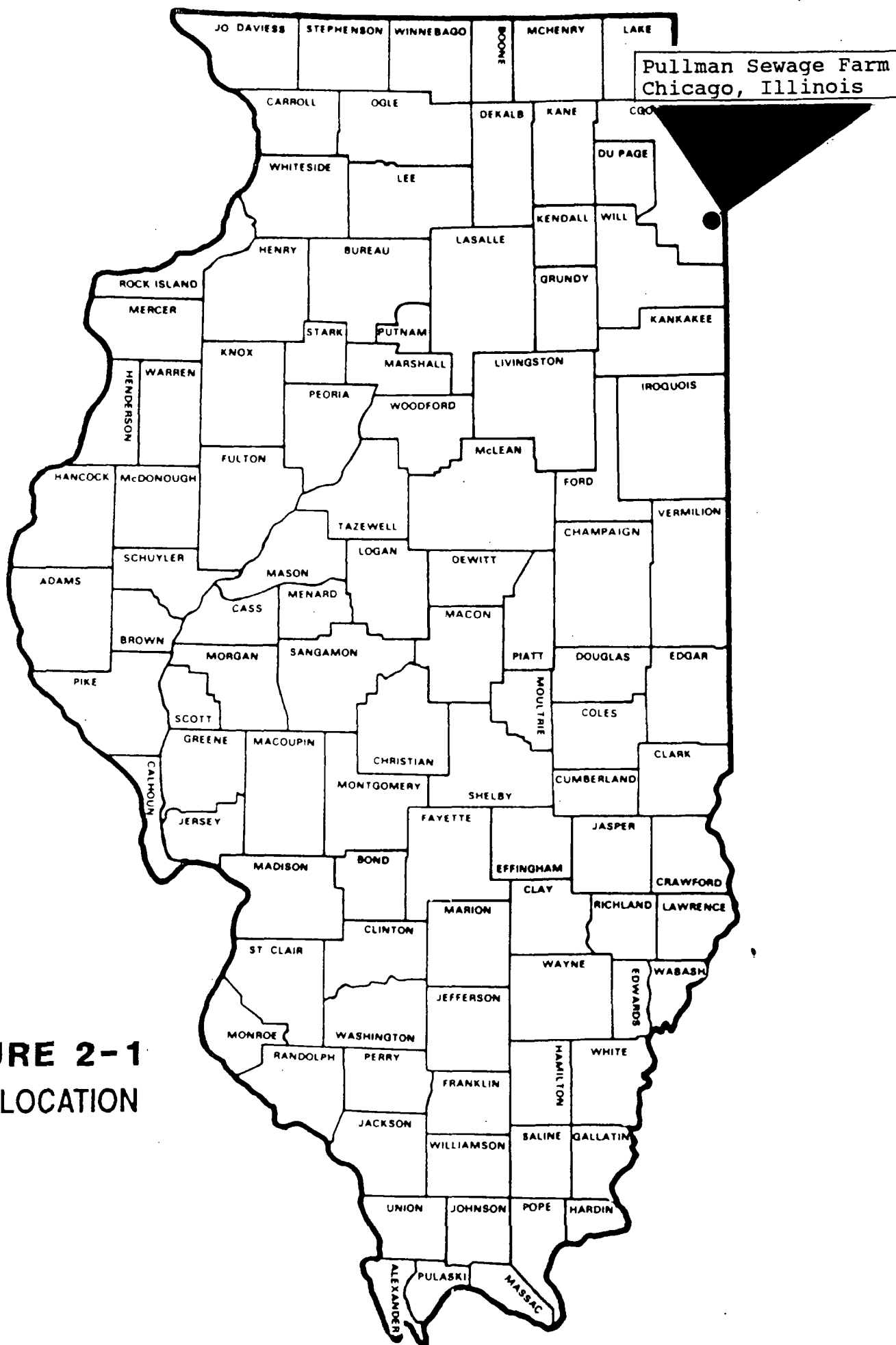
### 2.1 INTRODUCTION

This section includes information obtained from the SSI work plan preparation and background research of the facility.

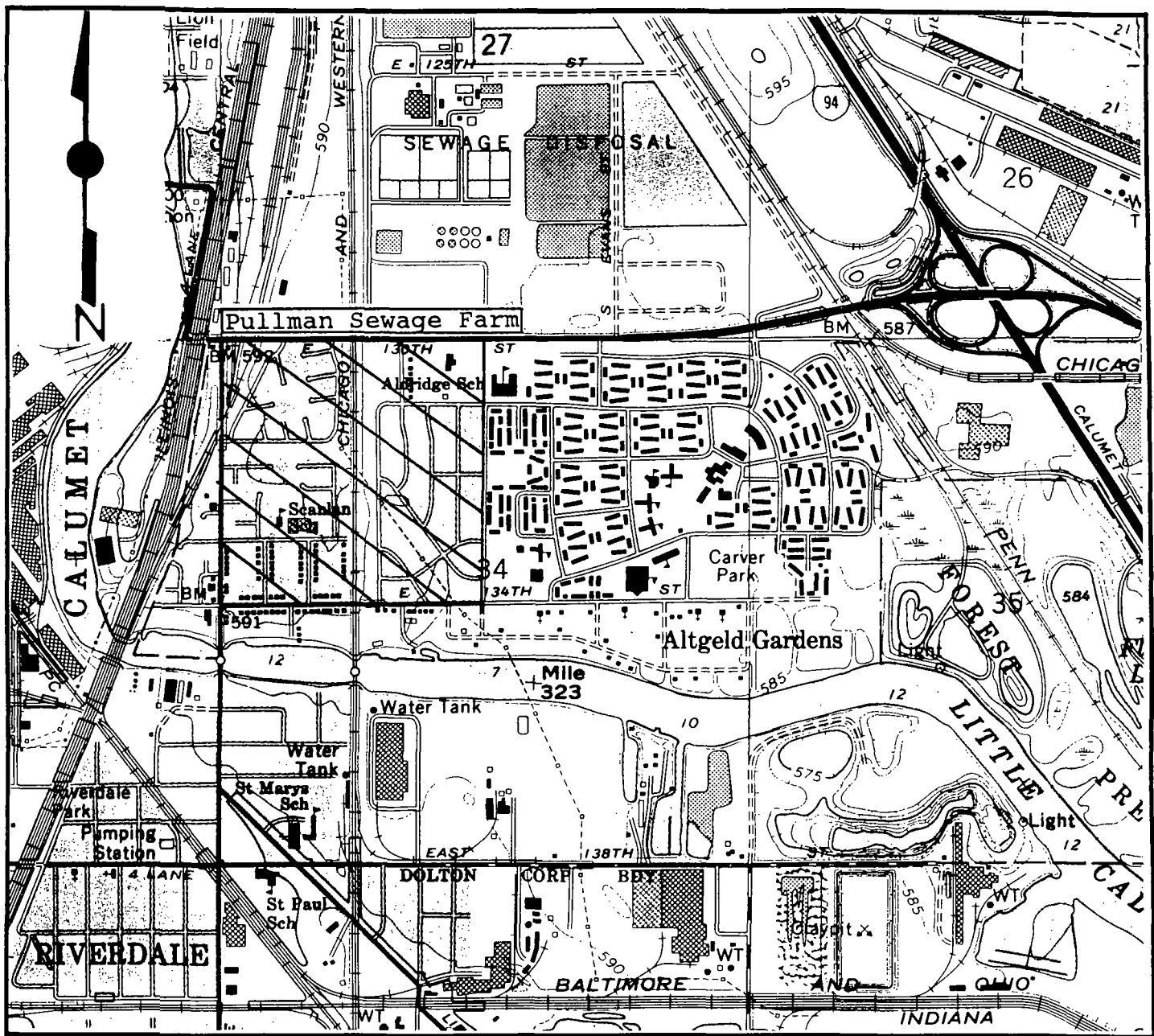
### 2.2 SITE DESCRIPTION

The former Pullman Sewage Farm was an active disposal farm used for the landfarming of industrial and municipal sewage. The sludge was pumped from the Town of Pullman (approximately three miles north) to the farm by underground pipes, where the sewage would be spread onto the farm. The sewage would filter through the soil, where an underdrain would carry the excess water to a ditch which led to Lake Calumet.

The sewage farm consisted of 140 acres of land in Chicago, Illinois (see Figure 2-1 and Figure 2-2) in Cook County (Northwest 1/4 Section 34, Township 37 North, Range 14 East). The old sewage farm is currently bordered by Indiana Avenue on the west, 130th Street on the north, 134th Street on the south and Lawrence Avenue on the east. A 4-mile radius map surrounding the Pullman Sewage Farm and a 15-mile site surface water map are provided in Appendix A and Appendix B of this report.



**FIGURE 2-1**  
SITE LOCATION



SOURCE: IEPA, 1990. BASE MAP: USGS, 1977 Lake Calumet, IL-IN. 7.5 Minute Quad

FIGURE 2-2

## SITE TOPOGRAPHIC MAP

Approximate Scale: 1" = 1553 feet.

### 2.3 SITE HISTORY

The land was acquired by the Pullman Land Association and was apparently a prairie prior to the use as a land farm. The actual construction of the sewers from the town of Pullman to the farm began in August of 1880, with the sewage farm operation starting in October of 1881. The pipes, from houses and shops, used gravity flow to carry sewage to an underground cistern with a capacity of 300,000 gallons. The sewage from the cistern was pumped through a twenty-inch iron pipe to a receiving tank at the sewage farm. The sewage was piped, through six-inch to one foot in diameter pipes, to the fields where a hydrant was located to allow the sewage to flow over the surface of the farm. (The sludge used in the land farm operations consisted of municipal sewage from the town of Pullman and industrial waste from shops associated with the Pullman rail car factory). The amount of sewage pumped yearly from the reservoir to the sewage farm from 1882 to 1892 is provided in Table 2-1.

TABLE 2-1

<u>YEAR</u>	<u>GALLONS</u>
1882 .....	211,620,160
1883 .....	358,354,400
1884 .....	443,815,480
1885 .....	468,302,120
1886 .....	472,748,080
1887 .....	573,700,640
1888 .....	588,607,760
1889 .....	602,250,000
1890 .....	657,001,360
1891 .....	617,664,000
1892 .....	698,122,780

Source: Doty, Mrs. Duane, 1893, The Town of Pullman, T.P Struhsacker Publisher.

The 140 acres used for the farm was underdrained with three to four-inch farm tile laid in rows fifty feet apart. The sewage would apparently filter through the soil, supposedly taking out nearly all of the impurities. The filtered material flowed into the underdrains to ditches, which carried the filtered waters to Lake Calumet.

The 140 acres used in the purification of sewage was also used for the growing of crops. A majority of the sludge was used on the fields during the dry months, helping the farm grow such crops as: onions, potatoes, cabbages, celery, beets, parsnips, carrots, sweet corn, asparagus, cauliflower and squashes. The most profitable crops for the sewage farm was found to be onions, cabbage and celery (Doty, 1893), with potatoes, celery, asparagus and cauliflower the least successful crops.

The sewage farm operated from 1881 up to approximately 1907 when Pullman's sewage went untreated into the Little Calumet River (Colten, 1985). However, raw sewage apparently flowed into the Lake Calumet from the sewage farm on a regular basis. Four eyewitness accounts published in the January-June 1893 Engineering News and American Railway Journal verified the discharging of "crude sewage" into the Lake. Mr. George Bensenberg wrote on November 21, 1982 "...but I know as previous to 1887, a large amount of crude sewage was run into Lake Calumet. This I found to be the



fact upon a visit to the farm and which finally the superintendent admitted and excused by saying that it was necessary in order to save the crops. The sewage was being run in a large open ditch, covered by bushes growing on each side, from near the farm to the lake" (Engineering News, 1893).

The last time the sewage farm was used is reported to be in 1907 (Colten, 1985), with the land use unknown until the building of apartments, houses and a school. The apartments are believed to be owned by the Chicago Housing Authority and private parties, while Dubois School is owned and administered by the Chicago Board of Education. The homes situated on the old sewage farm are believed to be owned by the occupants.

At this time the Concordia Park Apartments and the Golden Gate Park Subdivision are located on the old sewage farm. The information has not been found on whether or not the contractors building the apartments encountered any of the sewage farm's underground pipes. The ditch that led from the farm to Lake Calumet was not discovered nor was any information available to help locate the ditch area.

### 3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

#### 3.1 INTRODUCTION

This section outlines procedures and observations of the SSI at the Pullman Sewage Farm. Individual subsections address the site representative interview, reconnaissance inspection and sampling procedures. The SSI was conducted in accordance with the U.S.EPA-approved work plan.

The U.S.EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the Pullman Sewage Farm is located in Appendix C of this report.

#### 3.2 SITE REPRESENTATIVE INTERVIEW

No site representatives for the Pullman Company were present during the reconnaissance visit on May 11, 1990. The visit did include talking with Hazel Johnson and Cheryl Johnson of the Altgeld Garden office. The conversation centered on the IEPA's involvement of the sewage farm, the Pre-Remedial process and the possible sample locations within the Altgeld Garden area.

#### 3.3 RECONNAISSANCE INSPECTION

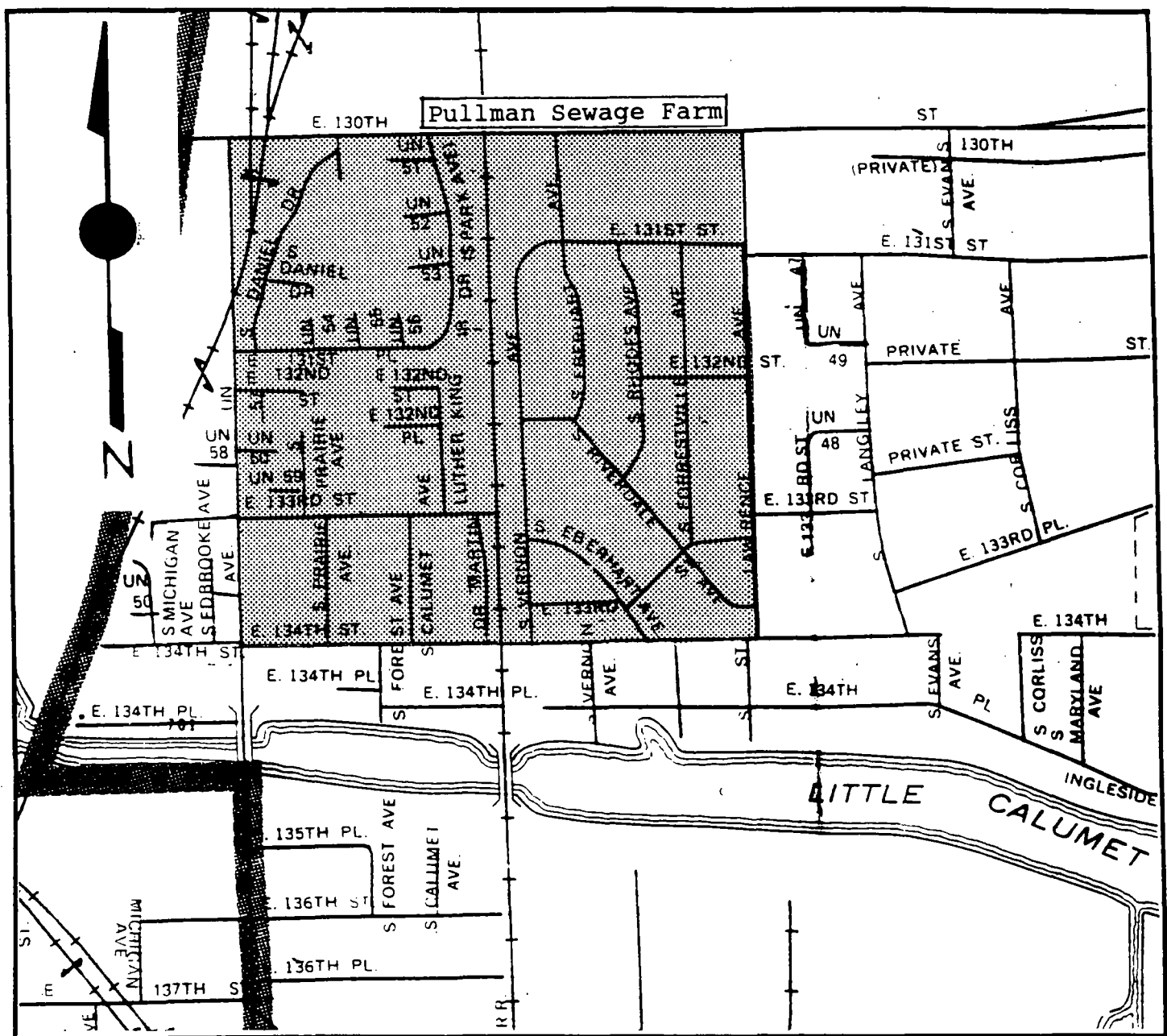
IEPA personnel conducted a reconnaissance inspection of the Pullman Sewage Farm and surrounding area on May 11, 1990. The inspection included a drive around the old Pullman Sewage farm area to identify potential sampling locations and

identify appropriate health and safety requirements. During the reconnaissance visit, it was determined that Level D could be worn during the sampling activities unless air monitoring equipment detected any concentrations over background.

Reconnaissance Inspection Observations. The Pullman Sewage Farm was located on the southeast corner of Indiana Avenue and 130th Street, approximately one mile south southwest of Lake Calumet. Current land use is primarily residential to the south and east, Metropolitan Water Reclamation District of Greater Chicago sewage disposal area to the north and the Little Calumet River to the west. The surface topography is relatively flat, with surface drainage flowing into storm water sewers. Some water from the southern part of the old sewage farm may flow south into the Little Calumet River. The Pullman Sewage Farm is bordered by Lawrence Avenue on the east, 130th Street on the north, 134th Street on the south and Indiana Avenue on the west (see Figure 3-1 for site details).

#### 3.4 SAMPLING PROCEDURES

Samples were collected by IEPA personnel following procedures outlined in IEPA's Pre-Remedial Quality Assurance Project Plan and Standard Operating Procedures (QAPP and SOP's are approved and on file with the U.S. EPA). The samples were collected to determine levels of U.S.EPA Target Compound List (TCL) compounds present at the site. The TCL



SOURCE: IEPA, 1990. BASE MAP: U.S. Census Bureau, 1980.

Approximate Scale: 1" = 840 feet.

FIGURE 3-1

## SITE DETAILS



3-4

and corresponding detection limits area provided in Appendix D of this report.

Soil Sampling Procedures. On May 16 and May 17, 1990 Illinois Environmental Protection Agency personnel collected twenty soil samples (see Figure 3-2 for locations) to compare a background sample to on-site soil samples. Soil samples X101-X110 were collected on May 16 and X111-X120 were collected on May 17, 1990. X101 was taken from 0 to 6 inches deep behind Carver Primary School, approximately 36 feet north of the parking pad and 90 feet east of the guardrail. X102 was taken from 5 to 6 feet deep in the same boring as X101. These two soil samples were taken as background because soil in this area appeared to be representative and undisturbed. X103 was taken from a 0 to 6 inches deep outside the Altgeld Garden office, in a grassy area between two buildings. X104 was taken from 5 to 6 feet deep in the same spot as X103. X105 was taken from 0 to 6 inches deep from a point 12 feet west of Aldridge School and 54 feet north of the school building's boundary. X106 was a soil sample taken from 5 to 6 feet deep from a point 30 feet north of the school building's southern boundary and 30 feet west of the school's western wall. X107 was taken from 8 to 14 inches deep approximately 120 feet north of the northwest corner of DuBois School and 21 feet west from the school's westernmost wall. X108 was taken from 3.5 to 4.5 feet deep from the same spot as X107. X109 was collected from 0 to 8 inches deep approximately 54 feet south of East 131st Place

and 135 feet east of Indiana Avenue. Soil sample X110 was collected from 3.5 to 4.5 feet deep in the same spot as X109. X111 was collected from 9 to 12 inches deep, in Golden Gate Park, from a point 90 feet west of South Vernon and 99 feet north of the park's southern fence. X112 was collected from 2 to 4 feet deep in the same spot as X111. X113 was also collected from 2 to 4 feet from the same spot as X112 and was used as the duplicate for this site. X114 was taken from 2 to 3 feet deep, 99 feet east of South Vernon in the power lines area. X115 was collected from 2.5 to 3.5 feet deep from a point 54 feet north of East 133rd and 48 feet west of South Forrestville, in a residential yard. X116 was collected from 2.5 to 3.5 feet deep in what appeared to be a community garden 90 feet north of 134th Street. X117 was taken from 2.5 to 3.5 feet deep in an area 120 feet north of 131st Street and 132 feet east of South Eberhart. X118 was collected from 2.5 to 3.5 feet deep from a point 250 feet east of Indiana Avenue and 100 feet south of 130th Street. X119 was taken from 2.5 to 3.5 feet deep approximately 42 feet west of Prairie Street and 114 feet north of 134th Street. This sample was collected from a backyard of a vacant house. X120 was collected from 2.5 to 3.5 feet deep approximately 36 feet north of 134th Street and 75 feet west of the Chicago and Western Indiana Railroad.

The shallow soil samples were collected with stainless steel spoons and the deeper soil samples were collected with stainless steel bucket augers. The soil was transferred

directly into the sample jars from the sampling device. The sample jars were evidence taped and packaged in accordance with U.S.EPA required procedures. The IEPA samples were analyzed for the TCL by IEPA's Springfield lab (organic analysis) and IEPA's Champaign lab (inorganic analysis). Photographs for the Pullman Sewage Farm screening site inspection are provided in Appendix E of this report.

Decontamination Procedures. Standard Illinois Environmental Protection Agency decontamination procedures were followed prior to the collection of all samples. The procedures included the scrubbing of all equipment (bailers, spoons, pans, etc.) with a non-foaming Trisodium Phosphate solution, rinsing with hot tap water, rinsing with acetone, rinsing with hot tap water again and final rinsed with distilled water. All equipment is air dried, then wrapped and stored in heavy duty aluminum foil for transport to the field. Field decontamination procedures include all of the above except the hot tap water rinse.



## 4. ANALYTICAL RESULTS

### 4.1 INTRODUCTION

This section includes the analytical results of Target Compound List compounds from IEPA collected samples at the Pullman Sewage Farm.

### 4.2 ANALYTICAL RESULTS FROM IEPA COLLECTED SAMPLES

Analysis of soil samples collected by IEPA personnel revealed the following substances: volatiles, semi-volatiles, pesticides, heavy metals, suspected laboratory artifacts and common inorganic soil constituents (see Table 4-1 for the summary of the soil sample results). Complete laboratory analytical data for the soil samples are provided in Appendix G of this report.

Pesticides were found in excess of background concentrations in five of the twenty samples. The highest concentration found was 844 ppb of 4,4'DDE in soil sample X103. Volatiles were also found in the soils samples, but at much lower concentrations as found in the pesticide analysis. The highest concentration of a volatile was acetone at 220 ppb in soil sample X115. Semi-volatiles were found in the soil samples, but many were estimated values. The highest concentration of a semi-volatile (excluding estimated values) was 1800 ppb of Fluoranthene in sample X103. Inorganic compounds such as aluminum, cadmium, chromium, iron, mercury and nickel were found in a number of the soil samples.

TABLE 4-1

Pullman Sewage Farm  
ILD981959208

## ANALYTICAL SUMMARY

All concentrations in ppb (parts per billion)

SAMPLING POINT	X101 5-16-90	X102 5-16-90	X103 5-16-90	X104 5-16-90	X105 5-16-90	X106 5-16-90	X107 5-16-90	X108 5-16-90	X109 5-16-90	X110 5-16-90
<b>Volatiles (ppb)</b>										
Methylene Chloride	--	--	--	--	3.00 J	--	--	--	--	--
Acetone	--	18.00 J	--	20.00 J	--	65.00 J	59.00 J	34.00 J	--	72.00 J
2-Butanone	12.00 R	13.00 R	14.00 R	12.00 R	13.00 R	13.00 R	12.00 R	13.00 R	13.00 R	13.00 R
Trichloroethene	--	--	5.00 J	--	6.00 J	--	--	--	4.00 J	--
Tetrachloroethene	--	--	10.00	--	10.00	--	--	--	8.00	--
Toluene	--	--	9.00	--	9.00	--	--	--	8.00	6.00 J
Xylenes (total)	--	--	3.00 J	--	--	--	--	--	--	--
<b>Pesticides (ppb)</b>										
Lindane	--	0.88 J	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	1.60 J	--	--	--
Heptachlor Epoxide	--	--	--	--	--	--	3.00 J	--	16.00 J	--
4,4'-DDE	--	--	844.00	--	26.00	--	138.00	--	85.00	--
Dieldrin	1.50 J	--	--	--	1.70 J	--	9.00 J	--	--	--
4,4'-DDD	--	--	79.00	--	--	--	58.00	--	39.00 J	--
4,4'-DDT	31.00 J	--	742.00	10.00 J	29.00 J	--	119.00	--	62.00	--
Endrin Ketone	--	--	10.00 J	--	--	--	--	--	--	--
gamma-Chlordane	--	--	--	--	--	--	--	--	10.00 J	--
<b>Semivolatiles (ppb)</b>										
Phenanthrene	--	--	630.00 J	--	--	--	--	--	--	--
Fluoranthene	200.00 J	--	1800.00	--	280.00 J	--	220.00 J	--	--	--
Pyrene	200.00 J	--	1600.00	--	290.00 J	--	210.00 J	--	--	--
Bis(2-ethylhexyl)phthalate	--	--	480.00 J	--	--	--	170.00 J	--	--	--
Chrysene	--	--	720.00 J	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	1000.00	--	200.00 J	--	170.00 J	--	--	--
Benzo(b)fluoranthene	--	--	830.00 J	--	210.00 J	--	170.00 J	--	--	--
Benzo(k)fluoranthene	--	--	510.00 J	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	670.00 J	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	440.00 J	--	--	--	--	--	--	--
<b>Inorganics (ppm)</b>										
Aluminum	1400.00	10800.00	11700.00	13000.00	13000.00	12400.00	9100.00	11500.00	2700.00	12000.00
Antimony	--	--	--	--	--	--	--	0.30 B	--	--
Arsenic	11.00	13.00	7.90	1.50 B	6.90	12.00	4.00	12.00	7.80	4.30
Barium	29.00 B	68.00	97.00	59.00	96.00	47.00	32.00 B	58.00	76.00	53.00
Beryllium	--	0.40 B	0.50 B	0.30 B	0.70 B	0.50 B	0.30 B	0.40 B	0.40 B	0.30 B
Cadmium	--	2.60	3.70	2.50	2.40	2.40	1.70	2.90	2.20	3.10
Calcium	235000.00	30000.00	14700.00	61200.00	11100.00	41800.00	15700.00	59500.00	13800.00	59800.00
Chromium	6.60	19.00	59.00	23.00	22.00	21.00	13.00	20.00	13.00	21.00
Cobalt	--	24.00	9.50 B	6.70 B	11.00 B	11.00	5.70 B	7.30 B	8.10 B	11.00
Copper	9.40	35.00	40.00	17.00	32.00	36.00	14.00	28.00	26.00	24.00

Pullman Sewage Farm  
ILD981959208

TABLE 4-1 (cont.)

ANALYTICAL SUMMARY

All concentrations in ppb (parts per billion)

SAMPLING POINT	X101 5-16-90	X102 5-16-90	X103 5-16-90	X104 5-16-90	X105 5-16-90	X106 5-16-90	X107 5-16-90	X108 5-16-90	X109 5-16-90	X110 5-16-90
Inorganics (ppm)										
Iron	4800.00	29600.00	21800.00	16800.00	22800.00	28200.00	14800.00	24300.00	15600.00	25200.00
Lead	20.00	16.00	82.00	11.00	60.00	18.00	8.80	19.00	56.00	13.00
Magnesium	113000.00	19200.00	8100.00	26900.00	6800.00	22000.00	10000.00	22700.00	7800.00	25100.00
Manganese	200.00	1170.00	560.00	288.00	473.00	318.00	176.00	248.00	350.00	336.00
Mercury	--	--	0.10	--	--	--	--	--	0.08	--
Nickel	--	51.00	25.00	25.00	27.00	34.00	16.00	25.00	19.00	31.00
Potassium	--	2590.00	2480.00	3100.00	2400.00	2400.00	1500.00	2600.00	1200.00	2700.00
Selenium	--	--	--	--	--	--	--	--	--	--
Sodium	186.00 B	136.00 B	76.00 B	249.00 B	113.00 B	146.00 B	67.00 B	133.00 B	81.00 B	200.00 B
Thallium	--	3.00	--	2.30	2.00	2.10	--	4.10	--	2.30
Vanadium	6.40 B	24.00	26.00	23.00	28.00	27.00	22.00	24.00	19.00	26.00
Zinc	59.00	70.00	167.00	51.00	125.00	64.00	38.00	54.00	117.00	55.00
Cyanide	3.00	--	1.10	--	--	--	--	--	--	--

-- indicates compound was analyzed for but not detected.

NA indicates compound was not analyzed for that sample.

TABLE 4-1 (cont)

SAMPLING POINT	X111 5-17-90	X112 5-17-90	X113 5-17-90	X114 5-17-90	X115 5-17-90	X116 5-17-90	X117 5-17-90	X118 5-17-90	X119 5-17-90	X120 5-17-90	Soil Blank 5-17-90
Volatiles (ppb)											
Methylene Chloride	--	--	--	--	--	--	--	2.00 J	--	6.00	--
Acetone	--	--	--	180.00	220.00	150.00	69.00	25.00	84.00	56.00	--
2-Butanone	4.00 R	3.00 R	12.00 R	12.00 R	7.00 R	11.00 R	13.00 R	11.00 R	13.00 R	11.00 R	10.00 R
Trichloroethene	5.00 J	--	--	4.00 J	6.00	--	--	8.00	--	9.00	--
Tetrachloroethene	11.00	--	--	11.00	10.00	--	--	18.00	--	11.00	--
Toluene	10.00	--	--	11.00	13.00	--	--	17.00	--	16.00	--
Xylenes (total)	--	--	--	3.00 J	2.00 J	--	--	2.00 J	--	2.00 J	--
Pesticides (ppb)											
Lindane	--	--	--	--	--	--	--	6.00 J	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--	--	--
Heptachlor Epoxide	7.00 J	--	--	--	--	--	--	50.00	--	--	--
4,4'-DDE	32.00 J	--	--	--	--	--	--	141.00	--	--	2.00
Dieldrin	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	23.00 J	--	--	--	--	--	--	104.00	--	--	--
4,4'-DDT	89.00	--	--	--	--	--	6.00 J	127.00	--	--	--
Endrin Ketone	--	--	--	--	--	--	--	--	--	--	--
gamma-Chlordane	--	--	--	--	--	--	--	26.00 J	--	--	--
Semivolatiles (ppb)											
Phenanthrene	340.00 J	--	--	--	--	--	240.00 J	--	--	--	--
Fluoranthene	660.00 J	--	--	--	--	--	350.00 J	220.00 J	--	--	--
Pyrene	690.00 J	--	--	--	--	--	300.00 J	200.00 J	--	--	--
Bis(2-ethylhexyl)phthalate	--	--	--	--	--	--	--	--	--	--	--
Chrysene	390.00 J	--	--	--	--	--	170.00 J	--	--	--	--
Benzo(a)anthracene	580.00 J	--	--	--	--	--	210.00 J	160.00 J	--	--	--
Benzo(b)fluoranthene	540.00 J	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	400.00 J	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	580.00 J	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	510.00 J	--	--	--	--	--	--	--	--	--	--
Inorganics (ppm)											
Aluminum	6900.00	4400.00	4600.00	6600.00	3200.00	4900.00	8500.00	4100.00	11000.00	3500.00	NA
Antimony	--	--	--	--	--	--	--	0.40 B	--	--	NA
Arsenic	17.00	11.00	9.40	5.90	10.00	15.00	7.40	7.10	2.40	3.70	NA
Barium	61.00	22.00 B	18.00 B	69.00	16.00 B	17.00 B	49.00	72.00	52.00	14.00 B	NA
Beryllium	0.30 B	0.20 B	0.10 B	0.10 B	0.10 B	0.20 B	0.30 B	0.20 B	0.40 B	--	NA
Cadmium	2.20	2.50	2.40	3.00	3.10	3.10	2.80	0.70 B	2.30	1.80	NA
Calcium	16700.00	26400.00	31500.00	35100.00	83600.00	49700.00	45100.00	2900.00	75500.00	46900.00	NA
Chromium	15.00	7.80	8.50	14.00	7.80	9.70	16.00	9.20	18.00	8.00	NA
Cobalt	7.10 B	8.10 B	5.20 B	11.00	5.70 B	4.50 B	11.00	4.60 B	8.10 B	4.10 B	NA
Copper	35.00	16.00	13.00	16.00	11.70	10.00	28.00	20.00	20.00	6.00	NA

TABLE 4-1 (cont)

SAMPLING POINT	X111 5-17-90	X112 5-17-90	X113 5-17-90	X114 5-17-90	X115 5-17-90	X116 5-17-90	X117 5-17-90	X118 5-17-90	X119 5-17-90	X120 5-17-90	Soil Blank 5-17-90
Inorganics (ppm)											
Iron	16100.00	14400.00	14000.00	17500.00	13400.00	14100.00	20600.00	10400.00	18000.00	8600.00	NA
Lead	87.00	14.00	13.00	25.00	6.70	11.00	100.00	128.00	8.80	8.20	NA
Magnesium	8700.00	13800.00	16500.00	20600.00	42100.00	23800.00	22100.00	1600.00	23500.00	21800.00	NA
Manganese	282.00	356.00	268.00	649.00	273.00	250.00	510.00	280.00	270.00	250.00	NA
Mercury	0.41	--	--	--	--	--	--	--	--	--	NA
Nickel	18.00	13.00	12.00	16.00	8.40	15.00	28.00	10.00	19.00	8.40	NA
Potassium	1300.00	810.00 B	800.00 B	850.00 B	510.00 B	900.00 B	2000.00	860.00 B	1400.00	740.00 B	NA
Selenium	--	--	--	--	--	--	0.20 B	--	--	--	NA
Sodium	113.00 B	97.00 B	94.00 B	139.00 B	110.00 B	133.00 B	192.00 B	128.00 B	260.00 B	128.00 B	NA
Thallium	--	--	--	--	--	--	2.70	--	--	--	NA
Vanadium	18.00	14.00	15.00	20.00	14.00	15.00	21.00	13.00	24.00	12.00	NA
Zinc	112.00	52.00	48.00	48.00	26.00	47.00	68.00	113.00	43.00	33.00	NA
Cyanide	--	--	--	--	--	--	--	--	--	--	NA

-- indicates compound was analyzed for but not detected.

NA indicates compound was not analyzed for that sample.

# U.S.E.P.A. DEFINED DATA QUALIFIERS

<u>QUALIFIER</u>	<u>DEFINITION ORGANICS</u>	<u>DEFINITION INORGANICS</u>
• U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
• J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
• C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
• B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
• D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and <u>all</u> concentration values are flagged with the "D" flag.	not used

QUALIFIER      DEFINITION ORGANICS

DEFINITION INORGANICS

- E      Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.

The reported value is estimated because of the presence of interference

- A      This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.

Method qualifier indicates analysis by Flame Atomic Absorption (AA).

- M      not used

Duplicate injection (a QC parameter) not met.

- N      not used

Spiked sample (a QC parameter) recovery not within control limits.

- S      not used

The reported value was determined by the Method of Standard Additions (MSA).

- W      not used

Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.

- \*      not used

Duplicate analysis (a QC parameter) not within control limits.

- +      not used

Correlation coefficient for MSA (a QC parameter) is less than 0.995.

QUALIFIER      DEFINITION ORGANICS

- P            not used
- CV          not used
- AV          not used
- AS          not used
- T            not used
- NR          The analyte was not required to be analyzed.
- R            Rejected data. The QC parameters indicate that the data is not usable for any purpose.

DEFINITION INORGANICS

- Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
- Method qualifier indicates analysis by Cold Vapor AA.
- Method qualifier indicates analysis by Automated Cold Vapor AA
- Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
- Method qualifier indicates Titrimetric analysis.
- The analyte was not required to be analyzed.
- Rejected data. The QC parameters indicate that the data is not usable for any purpose.



## 5. DISCUSSION OF MIGRATION PATHWAYS

### 5.1 INTRODUCTION

This section discusses data and information that apply to potential migration pathways and targets of TCL compounds that may be attributable to the Pullman Sewage Farm.

The four migration pathways of concern are groundwater, surface water, air and on-site exposure.

### 5.2 GROUNDWATER

There were no groundwater samples collected during the May 16 and May 17, 1990 SSI due to the lack of groundwater wells available to obtain a sample. However, the potential exists for contaminants to migrate to the groundwater from the contaminated soils.

According to Illinois EPA Division of Public Water Supplies, no public wells exist within four miles of this site. All municipalities within a four mile radius obtain water from Chicago, which pumps water from Lake Michigan. The few private wells that do exist within a four mile radius obtain water from the Silurian dolomite (aquifer of concern).

The geology of the area consists of glacial drift (clay, sand, gravel with some sand and gravel lenses) from the surface to approximately 60 feet deep. Underlying the glacial drift is the Silurian dolomite from 60 to 450 feet deep, Maquoketa shale from 450 to 565 feet, Galena-Platteville limestone from 565 to 890 feet and the St. Peter

sandstone from 890 to 1014 feet deep (ISWS well log). There are three major aquifers in the Chicago region that are used for groundwater resources. The aquifers are: 1) shallow Silurian dolomite, 2) Cambrian-Ordovician aquifer (which include the Galena-Platteville and Glenwood-St. Peter formations) and 3) Mt. Simon sandstone (ISWS and ISGS, 1959). The majority of private wells for homes or light industry are obtaining water from the shallow dolomite aquifer. The Maquoketa shale, a confining layer, separates the shallow dolomite aquifer from the Cambrian-Ordovician aquifer. The larger users of water will obtain water from the Cambrian-Ordovician aquifer, which is a combination of six different hydrologic units (ISWS and ISGS, 1959). The Eau Claire Formation (primarily shales) separates the Cambrian-Ordovician aquifer from the Mt. Simon sandstone aquifer. The Mt. Simon is used primarily by large industrial users of water in the Chicago Region due to the depth the well needs to be drilled to penetrate the sandstone. The aquifer of concern in the Pullman Sewage Farm area is the shallow dolomite.

Some private wells exist in the area of the Pullman Sewage Farm, however a majority of these wells are currently used for watering lawns only. There are approximately 150 wells within four miles of the site, serving 412 people, that use groundwater for drinking (ISWS well logs). The closest private well from the sewage farm is 0.9 miles southeast. Well logs for the area around the Pullman Sewage Farm are

provided in Appendix F.

### 5.3 SURFACE WATER

No surface water samples were collected during the May 16 and May 17, 1990 SSI of the Pullman Sewage Farm. However, there is a potential for surface water contamination from run-off emptying into a small ditch, then into the Little Calumet River. The Little Calumet (400 feet south of the Pullman Sewage Farm) flows east then north approximately 10.5 miles to Lake Michigan. Sewage wastes were discharged to Lake Calumet back in the late 1890's, but no analytical evidence has been found to confirm a surface water release.

The Little Calumet River is used for recreation only, with no surface water intakes within 15 miles downstream. The river drains 213 square miles, with an maximum depth of 11 feet. The river has very little flow gradient except in times of heavy rainfall or spring thaw. The Pullman Sewage Farm is not within the 100 year flood stage nor are there any wetland areas within 1 mile of the site.

### 5.4 AIR

No documented releases to the air were observed during the SSI. A photo-ionization detector (HNU) with an 11.7 eV lamp was used to screen the soil sample bore holes during soil sampling. No readings were observed over background levels.

The potential for windblown particulates to carry

contaminants off-site is possible since contaminants were found in the top six inches. Inorganic chemicals such as aluminum, iron, cadmium, chromium, nickel, mercury, and lead are the chemicals of concern. The populations at risk if an air release does occur are:

within 1/4 mile - 5,632 people  
within 1/2 mile - 10,887 people  
within 1 mile - 21,590 people  
1 - 2 miles - 80,274 people  
2 - 3 miles - 164,772 people  
3 - 4 miles - 295,662 people

The above populations were taken from 1980 Census maps for the City of Chicago and surrounding counties, which were compiled by the U.S. Census Bureau.

The residents of nearby Altgeld Gardens have been complaining of rashes on children and unexplained illnesses in adults. Some of these residents believe that the old Pullman Sewage Farm, along with some of the nearby industries, may be contributing to some of the areas health problems. However, at this time, site conditions have not proven to cause or accelerate any of the problems encountered by the nearby residents.

#### 5.5 ON-SITE EXPOSURE

Soil samples taken during the SSI indicate a potential for direct contact with contaminants. This potential is

based on analytical results indicating soil contamination in samples X103 (4,4'DDE 844 ppb, 4,4'DDT 742 ppb, chromium 59 ppm, 4,4'DDD 79 ppb), X105 (aluminum 13000 ppm, nickel 27 ppm, cadmium 2.4 ppm), X107 (iron 14800 ppm, nickel 16 ppm, aluminum 9100 ppm, 4,4'DDE 138 ppb, 4,4'DDT 119 ppb) and X109 (4,4'DDE 85 ppb, 4,4'DDT 62 ppb, mercury 0.08 ppm, nickel 19 ppm). All these samples were collected from the surface to 14 inches deep.

There are no barriers at the site due to the presence of an apartment complex and single family homes. The nearest resident is considered to be on-site with 3,811 people living in apartments or houses that were built on top of the old sewage farm (U.S. Census Bureau, 1980). Approximately 21,590 people live within a 1 mile radius of the site. This was obtained from the USGS topographic maps of the area and the Chicago, Illinois 1980 U.S. Census Bureau map.

## 6. BIBLIOGRAPHY

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APPENDIX A

SITE 4-MILE RADIUS MAP



APPENDIX B

SITE SURFACE WATER MAP

# SDMS US EPA Region V

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POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D981959208

II. CURRENT OWNER(S)

PARENT COMPANY (if applicable)

01 NAME Chicago Housing Authority	02 D+B NUMBER	08 NAME	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY Chicago	06 STATE IL	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME Chicago Board of Education	02 D+B NUMBER	08 NAME	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY Chicago	06 STATE IL	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

IV. REALTY OWNER(S) (if applicable: list most recent first)

01 NAME Pullman Factory	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.) Unknown	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY Pullman	06 STATE IL	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Illinois EPA Land Division Files  
Conversation with Chicago Housing Authority and  
Chicago Board of Education



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D981959208

II. ON-SITE GENERATOR

01 NAME <i>Not Applicable</i>	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME <i>Pullman Rail Car Company</i>	02 D+B NUMBER	01 NAME <i>Town of Pullman</i>	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.) <i>unknown</i>	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.) <i>unknown</i>	04 SIC CODE		
05 CITY <i>Pullman</i>	06 STATE <i>IL</i>	07 ZIP CODE	05 CITY <i>Pullman</i>	06 STATE <i>IL</i>	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME <i>Not Applicable</i>	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

*Illinois EPA Land Division Files*  
*Doty, Mrs. Duane, The Town of Pullman*



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 981959208

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ S. CAPPING/COVERING  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ T. BULK TANKAGE REPAIRED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ U. GROUT CURTAIN CONSTRUCTED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ V. BOTTOM SEALED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ W. GAS CONTROL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ X. FIRE CONTROL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ Y. LEACHATE TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ Z. AREA EVACUATED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ 1. ACCESS TO SITE RESTRICTED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ 2. POPULATION RELOCATED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*Not Applicable*

01 ☐ 3. OTHER REMEDIAL ACTIVITIES  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

*None*

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

*Illinois EPA Local Division Files.*

# TARGET COMPOUND LIST

## Volatile Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. chloromethane	10 ug/l	10 ug/kg
2. bromomethane	10	10
3. vinyl chloride	10	10
4. chloroethane	10	10
5. methylene chloride	5	5
6. acetone	10	10
7. carbon disulfide	5	5
8. 1,1-dichloroethene	5	5
9. 1,1-dichloroethane	5	5
10. 1,2-dichloroethene (total)	5	5
11. 1,2-dichloropropane	5	5
12. chloroform	5	5
13. 1,2-dichloroethane	5	5
14. 2-butanone	10	10
15. 1,1,1-trichloroethane	5	5
16. carbon tetrachloride	5	5
17. vinyl acetate	10	10
18. dichlorobromomethane	5	5
19. c-1,3-dichloropropene	5	5
20. trichloroethene	5	5
21. benzene	5	5
22. chlorodibromomethane	5	5
23. 1,1,2-trichloroethane	5	5
24. t-1,3-dichloropropene	5	5
25. bromoform	5	5
26. 2-hexanone	10	10
27. 4-methyl-2-pentanone	10	10
28. 1,1,2,2-tetrachloroethane	5	5
29. tetrachloroethene	5	5
30. toluene	5	5
31. chlorobenzene	5	5
32. ethylbenzene	5	5
33. styrene	5	5
34. total xylenes	5	5

CRDL - Contract Required Detection Limit

DRINKING WATER SAMPLES -- In the case of drinking water samples, the Lab can be requested to report the instrument detection limit which is lower than the CRDL for VOC analysis. This request must be made at the time of scheduling since more samples will be required by the Lab. (See footnote on previous page).

## Base/Neutral Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. Hexachloroethane	10 ug/l	330 ug/kg
2. Bis (2-chloroethyl) ether	10	330
3. Benzyl Alcohol	10	330
4. Bis (2-chloroisopropyl) ether	10	330
5. N-nitrosodi-n-propylamine	10	330
6. Nitrobenzene	10	330
7. Hexachlorobutadiene	10	330
8. 2-Methylnaphthalene	10	330
9. 1,2,4-trichlorobenzene	10	330
10. Isophorone	10	330
11. Naphthalene	10	330
12. 4-Chloroaniline	10	330
13. Bis (2-chloroethoxy) methane	10	330
14. Hexachlorocyclopentadiene	10	330
15. 2-chloronaphthalene	10	330
16. 2-Nitroaniline	50	1600
17. Acenaphthylene	10	330
18. 3-Nitroaniline	50	1600
19. Acenaphthene	10	330
20. Dibenzofuran	10	330
21. Dimethylphthalate	10	330
22. 2,6-Dinitrotoluene	10	330
23. Fluorene	10	330
24. 4-Nitroaniline	50	1600
25. 4-Chlorophenyl-phenyl ether	10	330
26. 2,4-Dinitrotoluene	10	330
27. Diethylphthalate	10	330
28. N-Nitrosodiphenylamine	10	330
29. Hexachlorobenzene	10	330
30. Phenanthrene	10	330
31. 4-Bromophenyl-phenyl ether	10	330
32. Anthracene	10	330
33. Dibutylphthalate	10	330
34. Fluoranthene	10	330
35. Pyrene	10	330
36. Butyl benzyl phthalate	10	330
37. Bis (2-ethylhexyl) phthalate	10	330
38. Chrysene	10	330
39. Benzo (a) anthracene	10	330
40. 3,3'-Dichlorobenzidene	20	660
41. Di-n-octyl phthalate	10	330
42. Benzo (b) fluoranthene	10	330
43. Benzo (k) fluoranthene	10	330
44. Benzo (a) pyrene	10	330
45. Indeno (1,2,3-cd) pyrene	10	330
46. Dibenzo (a,h) anthracene	10	330
47. Benzo (g,h,i) perylene	10	330
48. 1,2-Dichlorobenzene	10	330
49. 1,3-Dichlorobenzene	10	330
50. 1,4-Dichlorobenzene	10	330

# Acid Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. Benzoic Acid	50 ug/l	1600 ug/kg
2. Phenol	10	330
3. 2-chlorophenol	10	330
4. 2-nitrophenol	50	1600
5. 2-methylphenol	10	330
6. 2,4-dimethylphenol	10	330
7. 4-methylphenol	10	330
8. 2,4-dichlorophenol	10	330
9. 2,4,6-trichlorophenol	10	330
10. 2,4,5-trichlorophenol	50	1600
11. 4-chloro-3-methylphenol	10	330
12. 2,4-dinitrophenol	50	1600
13. 2-methyl-4,6-dinitrophenol	50	1600
14. Pentachlorophenol	50	1600
15. 4-nitrophenol	50	1600



# Pesticide Target Compounds

Compound	Water CRDL	Soil/Solid CRDL
1. alpha-BHC	.05 ug/l	8.0 ug/kg
2. beta-BHC	.05	8.0
3. delta-BHC	.05	8.0
4. Lindane (gamma-BHC)	.05	8.0
5. Heptachlor	.05	8.0
6. Aldrin	.05	8.0
7. Heptachlor epoxide	.05	8.0
8. Endosulfan I	.05	8.0
9. 4,4'-DDE	.10	16.0
10. Dieldrin	.10	16.0
11. Endrin	.10	16.0
12. 4,4'-DDD	.10	16.0
13. Endosulfan II	.10	16.0
14. 4,4'-DDT	.10	16.0
15. Endrin aldehyde	.10	16.0
16. Endosulfan sulfate	.10	16.0
17. Methoxychlor	.50	80.0
18. alpha-Chlorodane	.5	80.0
19. gama chlorodane	.5	80.0
20. Toxaphene	.50	80.0
21. Arochlor-1016	1.0	160.0
22. Arochlor-1221	.50	80.0
23. Arochlor-1232	.50	80.0
24. Arochlor-1242	.50	80.0
25. Arochlor-1248	.50	80.0
26. Arochlor-1254	1.0	160.0
27. Arochlor-1260	1.0	160.0

## Inorganic Target Compounds

### Metals Analyses (CRDL)-ug/l\*

Aluminum	200
Antimony	60
Arsenic	10
Barium	200
Beryllium	5
Cadmium	5
Calcium	5000
Chromium	10
Cobalt	50
Copper	25
Iron	100
Lead	5
Magnesium	5000
Manganese	15
Mercury	0.2
Nickel	40
Potassium	5000
Selenium	5
Silver	10
Silver	5000
Thallium	10
Vanadium	50
Zinc	20

### Other Inorganics

Cyanide  
Sulfide  
Phenols  
Nitrogen-Ammonia  
Nitrogen, Total Kjeldahl  
Nitrogen-Nitrate  
Boron  
pH  
Sulfate  
Chloride

\*Any analytical method specified in the Quality Assurance Project Plan (QAPP) may be utilized as long as the documented instrument or method detection limits meet the Contract Required Detection Level requirements. Higher detection levels may only be used in the following circumstance:

If the sample concentration exceeds two times the detection limit of the instrument or method in use, the value may be reported even though the instrument or method detection limit may not equal the CRDL. This is illustrated in the example below:

For lead:

Method in use -- ICP

Instrument Detection Limit (IDL) = 40

Sample Concentration = 85

Contract Required Detection Level (CRDL) = 5

The value of 85 may be reported even though instrument detection limit is greater than required detection level. The instrument or method detection limit must be documented as described in Form IIIX.

These CRDL are the instrument detection limits obtained in pure water that must be met using ICP/Flame AA or Furnace AA. The detection limits for samples may be considerably higher depending on the sample matrix.

### IEPA - CLP BOTTLE LIST

Container Code	Container Description	Matrix	Analysis
1	1 l amber glass*	Water	Pesticide, PCBs or BN/A
3	1 l plastic	Water	Metals, Cyanide, General, Nutrients, Radioactivity
5	32 oz glass	Water soil or waste	Oil & Grease, Phenol, BN/A, Pesticides, PCBs, Metals, Mercury, Cyanide, Nutrients, General
8	40 ml vial	Water	VOA
9	80 oz amber glass	Water	Pesticide, PCBs or BN/A
10	500 ml plastic	Water	Mercury
11	1 gal plastic	Water	Pre-filtration (Monitoring well samples are Filtered. Drinking water is not.)
12	2 oz glass	Soil or Waste	VOA

Generally wide mouth bottles are used for soils and small mouth bottles are used for water. The exception is a wide mouth bottle used for phenols, oil and grease in water.

Bottle sizes are designed to provide the analytical laboratory with the required quantity of sample. The bottles should be filled to capacity except under special prearranged circumstances.

An 8 oz. wide mouth glass bottle has been used for several special projects such as soil sampling for PCBs or dioxin or for waste samples. These bottles will soon be added to our regular stock.

\*This bottle is used only for projects not requiring the QC control that is built into standard analyses by the contract.

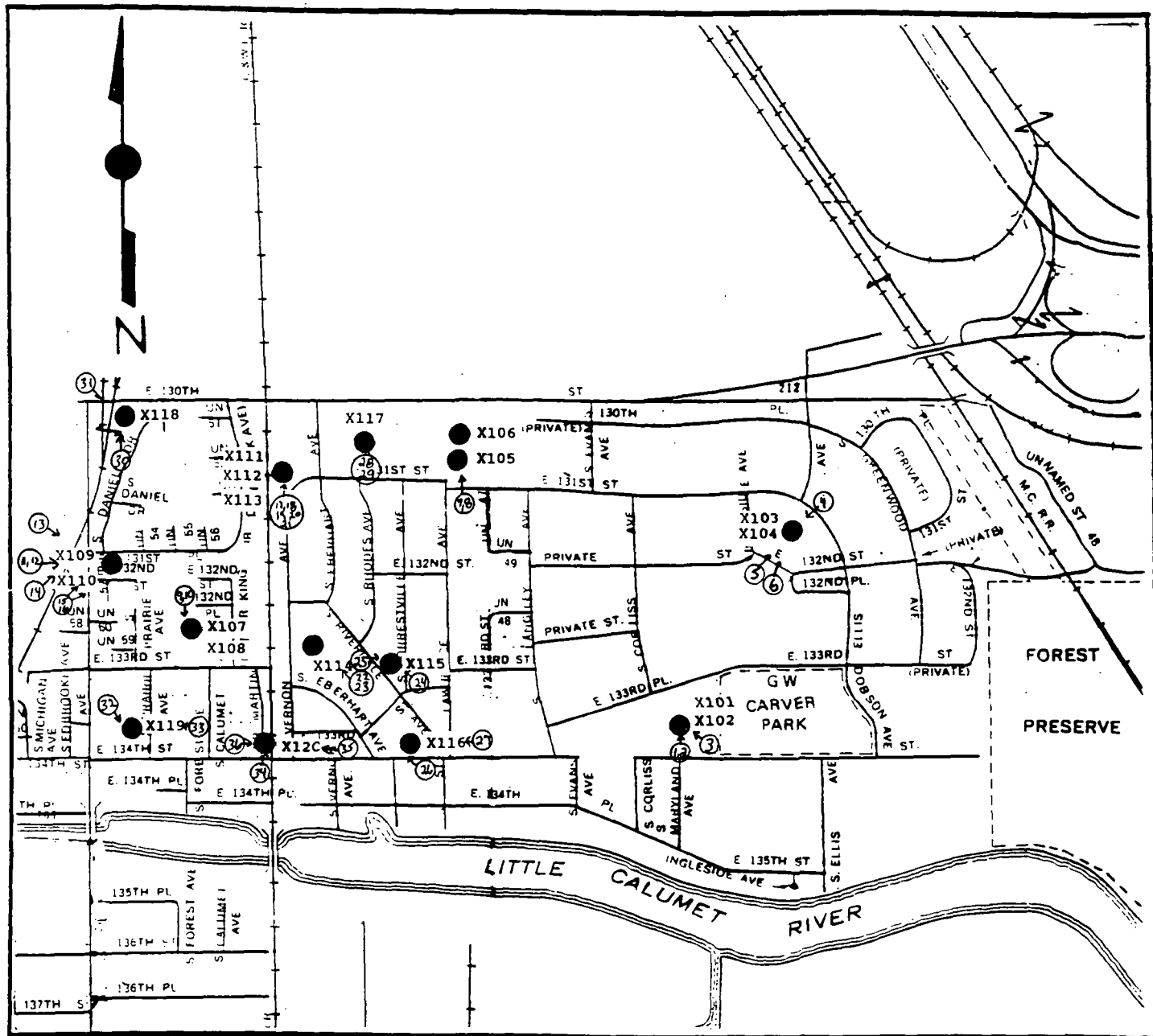
PRESERVATIVE COLOR CODE

<u>Parameter and Sample Type</u>	<u>Container Type(s)</u>	<u>Reagent Name</u>	<u>Color Code</u>
Oil/Grease	5	(50% H <sub>2</sub> SO <sub>4</sub> )	Brown
Phenols	5	(10% CU SO <sub>4</sub> , H <sup>3</sup> PO <sub>4</sub> )	Pink
Cyanide	3, 5	(6 Normal Na OH)	Black
Metals	3, 5	(50% HN O <sub>3</sub> )	Green
Mercury	5, 10	(25% HN O <sub>3</sub> , 25% K <sub>2</sub> CR <sub>2</sub> O <sub>7</sub> )	Silver
Nutrients	3, 5	(50% H <sub>2</sub> SO <sub>4</sub> )	Yellow
Prefiltration	11	None	--
General	3, 5	None	
Radioactivity	3, 5	(50% HNO <sub>3</sub> )	Green
Sulfides	3	(2 Normal Zinc acetate)	Purple

The preservative should be poured into the empty container first and then the sample liquid added.

APPENDIX E

IEPA SITE PHOTOGRAPHS



SOURCE: IEPA, 1990. BASE MAP: U.S. Census Bureau, 1980.

Approximate Scale 1" = 1123 Feet.

## PHOTOGRAPH LOCATION MAP

APPENDIX C

U.S.EPA FORM 2070-13



# Site Inspection Report

L0316280023--Cook County  
Pullman Sewage Farm  
ILD981959208





L0316280023

POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

## I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 981959208

## II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Pullman Sewage Farm		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 130 <sup>th</sup> and Indiana Ave			
03 CITY Chicago	04 STATE IL	05 ZIP CODE 60643	06 COUNTY Cook	07 COUNTY CODE 031	08 CONG DIST IL-02
09 COORDINATES LATITUDE 41 39 30.0 LONGITUDE -87 36 45.0		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER <input type="checkbox"/> G. UNKNOWN			

## III. INSPECTION INFORMATION

01 DATE OF INSPECTION 05/16/90 MONTH DAY YEAR	02 SITE STATUS <input type="checkbox"/> ACTIVE <input checked="" type="checkbox"/> INACTIVE	03 YEARS OF OPERATION 1881   1907 BEGINNING YEAR ENDING YEAR
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR <input checked="" type="checkbox"/> E. STATE <input type="checkbox"/> F. STATE CONTRACTOR <input type="checkbox"/> G. OTHER		

05 CHIEF INSPECTOR Gregory W. Dunn	06 TITLE EPS II	07 ORGANIZATION IEPA	08 TELEPHONE NO. (217) 782-6761
09 OTHER INSPECTORS Tim Murphy	10 TITLE EPS II	11 ORGANIZATION IEPA	12 TELEPHONE NO. (217) 782-6761
Tom Crause	EPS IV	IEPA	(217) 782-6761
			( )
			( )
			( )
13 SITE REPRESENTATIVES INTERVIEWED None	14 TITLE	15 ADDRESS	16 TELEPHONE NO. ( )
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION 9:15 a.m.	19 WEATHER CONDITIONS Overcast, Drizzle, ≈ 60°F
---	------------------------------------	--

## IV. INFORMATION AVAILABLE FROM

01 CONTACT Gregory W. Dunn	02 OF (Agency/Organization) IEPA	03 TELEPHONE NO. ( )		
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY IEPA	06 ORGANIZATION Pre-Remedial Program	07 TELEPHONE NO. (217) 782-6761	08 DATE 09/21/90 MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 981959203

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 412 04 NARRATIVE DESCRIPTION  
A potential exists for contaminants to migrate to groundwater. Most of the groundwater use within four miles of the site, is by Industry. However, 150 private wells do use groundwater for drinking.

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION  
Contaminants from the site could flow south to the Little Calumet River  $\approx$  400 feet from the site. The Little Calumet River flows east and north to

01 ☒ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 295,662 04 NARRATIVE DESCRIPTION  
Since contaminants were found in the top 6 inches, the potential exists for windblown particulates to carry contaminants off-site.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION  
None documented or observed.

01 ☒ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 21,590 04 NARRATIVE DESCRIPTION  
Soil samples taken on May 16 and 17, 1990 indicate contaminants in the top 6 inches. The population within these areas may come into contact with the contaminated soil.

01 ☒ F. CONTAMINATION OF SOIL 02 ☒ OBSERVED (DATE: 1990) ☐ POTENTIAL ☐ ALLEGED  
03 AREA POTENTIALLY AFFECTED: Possibly 140 04 NARRATIVE DESCRIPTION  
(Acres)  
Soil samples collected during the SSI indicate contaminants down to four feet. The samples contained pesticides, volatiles, semi-volatiles and inorganic compound.

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 412 04 NARRATIVE DESCRIPTION  
See "A" above. 150 private wells exist within four miles of the site. The wells obtain water from the shallow Silurian dolomite at depths from 60 to 450 feet below the surface.

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 WORKERS POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION  
None documented or observed.

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION  
None documented or observed.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION  
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE IL 02 SITE NUMBER D981959208

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input type="checkbox"/> G. STATE (Specify)				
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input checked="" type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCENERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C. DRUMS, ABOVE GROUND			<input type="checkbox"/> C. CHEMICAL/PHYSICAL	
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	06 AREA OF SITE
<input checked="" type="checkbox"/> G. LANDFARM	<u>140</u>	<u>AC</u>	<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	<u>140</u> (Acres)
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	
<input type="checkbox"/> I. OTHER (Specify)				

07 COMMENTS

The Pullman Sewage Farm encompassed 140 acres, with most if not all used for the landfarming of Industrial and Domestic Sewage Sludge. At this time, houses, apartments, a school and a produce store are all located on the 140 acres.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The Sewage was Pumped onto the farm and left to filtrate downward into the soil. No liners, dikes, etc. were known to exist.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

Soil Samples found contaminants in the top six inches.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Illinois EPA Land Division Files  
SSI of May 16 and 17, 1990  
Doty, Mrs. Duane 1893, The Town of Pullman.





POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL 0981959208

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A.  $10^{-6} - 10^{-8}$  cm/sec ☒ B.  $10^{-4} - 10^{-6}$  cm/sec ☐ C.  $10^{-4} - 10^{-3}$  cm/sec ☐ D. GREATER THAN  $10^{-3}$  cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than  $10^{-6}$  cm/sec) ☐ B. RELATIVELY IMPERMEABLE ( $10^{-4} - 10^{-6}$  cm/sec) ☒ C. RELATIVELY PERMEABLE ( $10^{-2} - 10^{-4}$  cm/sec) ☐ D. VERY PERMEABLE (Greater than  $10^{-2}$  cm/sec)

03 DEPTH TO BEDROCK

60 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

4 (ft)

05 SOIL pH

unknown

06 NET PRECIPITATION

2 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.4 (in)

08 SLOPE

SITE SLOPE  
0.0 %

DIRECTION OF SITE SLOPE

—

TERRAIN AVERAGE SLOPE

0.0 %

09 FLOOD POTENTIAL

SITE IS IN NA YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

A. NA (mi)

OTHER

B. NA (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

1.0 (mi)

ENDANGERED SPECIES: INDIANA BAT (may inhabit area)

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

A. 0.0 (mi)

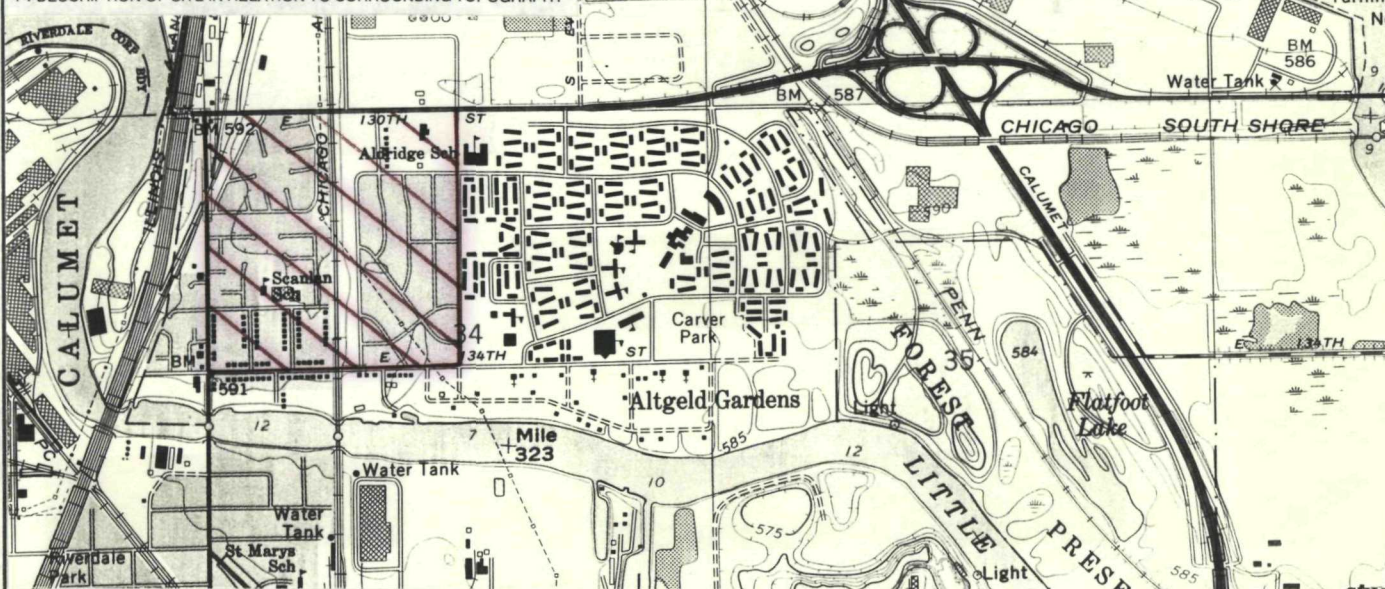
RESIDENTIAL AREAS; NATIONAL/STATE PARKS,  
FORESTS, OR WILDLIFE RESERVES

B. 0.0 (mi)

AGRICULTURAL LANDS  
PRIME AG LAND AG LAND

C. 7.4 (mi) D. 7.4 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Illinois State Water Survey Well Logs  
USGS Topographic map Lake Calumet, IL-IN  
Illinois EPA Land Division Files  
Illinois EPA Public Water Supply Files

APPENDIX D

TARGET COMPOUND LIST



DATE: May 16, 1990

TIME: 9:30 am

Photograph by:

Tom Crause

Location: L0316280023--Cook County

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X101. Carver Primary

School is in the background.

1



DATE: May 16, 1990

TIME: 10:00 am

Photograph by:

Tom Crause

Location: L0316280023 Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample

point X102

2





DATE: May 16, 1990

TIME: 10:00 AM

Photograph by:

Tim Murphy

Location: L0316280023 Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the northwest at sample

point X102. Carver Middle

School is on left and Carver

Primary School is on the right.

3



DATE: May 16, 1990

TIME: 10:30 AM

Photograph by:

Tom Crause

Location: L0316280023 Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the southwest at sample

point X103. The building in

back of the photo is used by

Altgeld Garden Crews

4





DATE: May 16, 1990

TIME: 10:50 AM

Photograph by:

Tom Crause

Location: 20316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the northeast at sample

point X104. Altgeld Gardens

Liquor Store/Supermarket is

in the background

5



DATE: May 16, 1990

TIME: 10:50 AM

Photograph by:

Tom Crause

Location: 20316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north northeast at

Sample point X104. Altgeld

Gardens Liquor/Supermarket

Store in background

6





DATE: May 16, 1990

TIME: 11:35 AM

Photograph by:

Tom Crause

Location: LO316280023 - - Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X105. Aldridge school

is on left side of photo.

7



DATE: May 16, 1990

TIME: 11:45 AM

Photograph by:

Tom Crause

Location: LO316280023 - - Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X106. Aldridge School

is on left side of photo

8





DATE: May 16, 1990

TIME: 1:40 pm

Photograph by:

Tom Crause

Location: L0316280023-- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the south at sample point

X107 behind DuBois

School.

9



DATE: May 16, 1990

TIME: 2:05 pm

Photograph by:

Tom Crause

Location: L0316280023-- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the south at sample point

X108 behind DuBois

School.

10





DATE: May 16, 1990

TIME: 2:35 pm

Photograph by:

Tom Crause

Location: 40316280023--Cook County

Pullman Sewage Farm

ILD 981 959208

Comments: Picture taken toward

the east at sample point

X109 in a vacant lot

just east of Indiana Avenue

11



DATE: May 16, 1990

TIME: 2:35 pm

Photograph by:

Tom Crause

Location: 40316280023--Cook Co.

Pullman Sewage Farm

ILD 981 959208

Comments: Picture taken toward

the east at sample point

X109 in a vacant lot

just east of Indiana Avenue

12





DATE: May 16, 1990

TIME: 2:40 pm

Photograph by:

Tom Crause

Location: 60316280023-Cook Co.

Pullman Sewage Farm

ILD 981959208

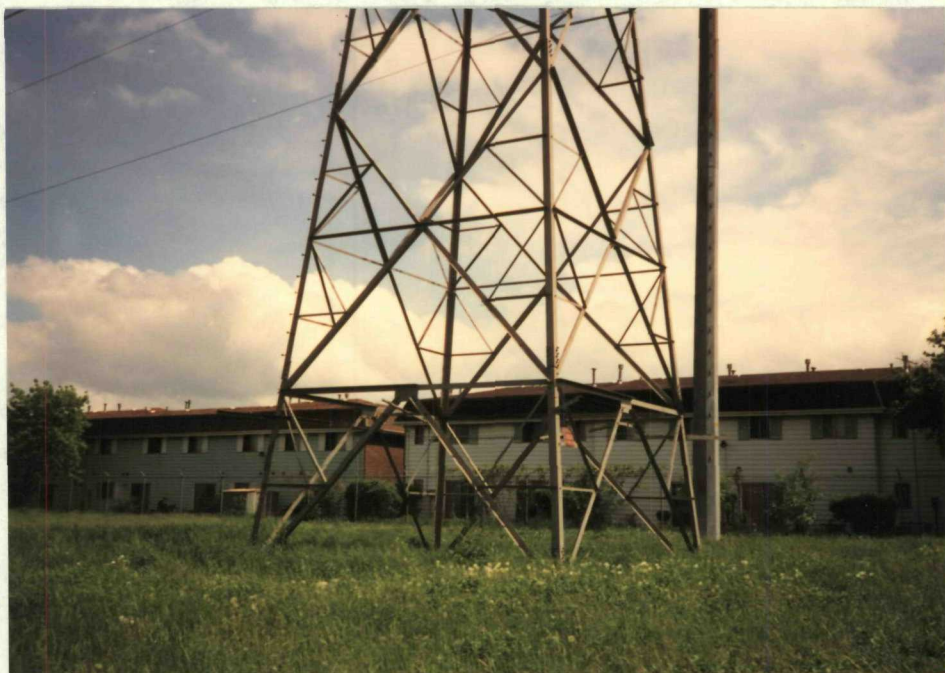
Comments: Picture taken toward

the south southeast from

Sample point X110 at one of

the nearby Apartment Complexes

13



DATE: May 16, 1990

TIME: 2:40 pm

Photograph by:

Tom Crause

Location: 60316280023-Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the northeast from sample

point X110 at Concordia

Park Apartments

14





DATE: May 16, 1990  
 TIME: 2:40 pm  
 Photograph by: Tom Clauss  
 Location: 60316280023--Cook Co.  
 Pullman Sewage Farm  
 ILD 981959208  
 Comments: Picture taken toward the east at sample point X110. Taken from a vacant lot east of Indiana Avenue.  
 16



DATE: May 16, 1990  
 TIME: 2:40 pm  
 Photograph by: Tom Clauss  
 Location: 60316280023--Cook Co.  
 Pullman Sewage Farm  
 ILD 981959208  
 Comments: Picture taken toward the east northeast at sample point X110. Taken from a vacant lot east of Indiana Avenue.  
 15





DATE: May 17, 1990

TIME: 8:50 Am

Photograph by:

Tom Crause

Location: 40316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north northeast at sample

point XIII in Golden Gate

Park Subdivision's park.

17



DATE: May 17, 1990

TIME: 8:50 Am

Photograph by:

Tom Crause

Location: 40316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north northeast at sample

point XIII in Golden Gate

Park Subdivision's park.

18





DATE: May 17, 1990

TIME: 8:55 am

Photograph by:

Tom Crause

Location: 20316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X112. Looking north toward

park in Golden Gate Park

Subdivision

19



DATE: May 17, 1990

TIME: 8:55 am

Photograph by:

Tim Murphy

Location: 20316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X113. Looking north toward

park in Golden Gate Park

Subdivision

20





DATE: May 17, 1990

TIME: 8:55 AM

Photograph by:

Tim Murphy

Location: 40316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X113. Toward park in

Golden Gate Park Subdivision

21



DATE: May 17, 1990

TIME: 9:30 AM

Photograph by:

Tim Murphy

Location: 40316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

northwest at sample point

X114 in power company

Right-of-way.

22





DATE: May 17, 1990

TIME: 9:30 AM

Photograph by:

Tim Murphy

Location: L0316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the northwest at sample

Point X114 in power company

right-of-way

23



DATE: May 17, 1990

TIME: 10:00 AM

Photograph by:

Tim Murphy

Location: L0316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north northwest at

sample point X-115. At the

corner of S. Forestville Ave and

E. 133rd Street.

24

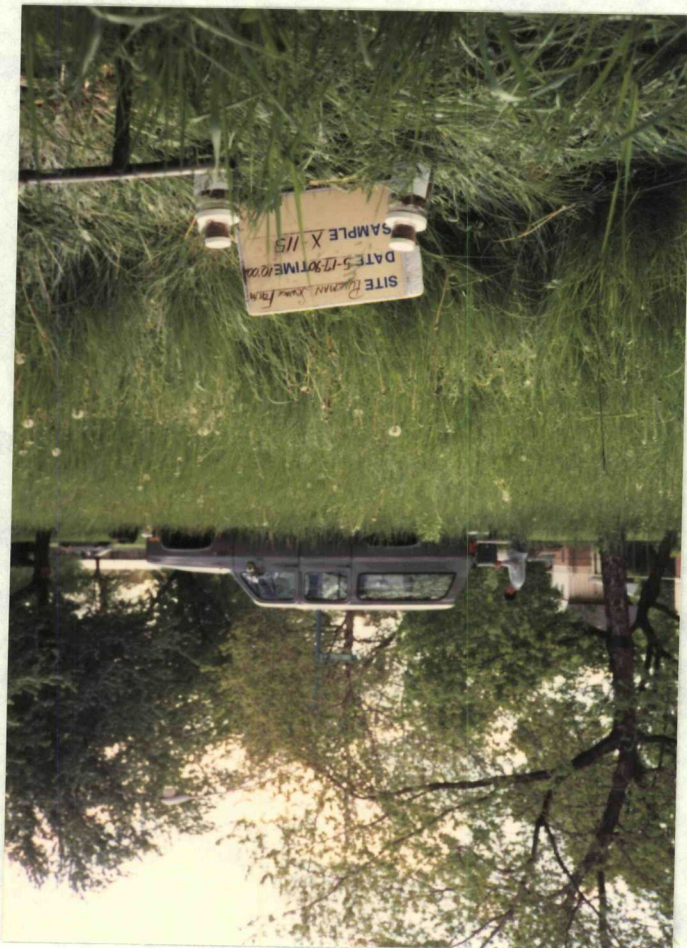




DATE: May 17, 1990  
 TIME: 10:20 am  
 Photograph by: Greg Dunn  
 Location: 60316280023--Cook Co.  
 Pullman Sewage Farm  
 ILD 981959208  
 Comments: Picture taken toward  
 the northwest at sample  
 Point X116. Near a  
 garden area.



DATE: May 17, 1990  
 TIME: 10:00 am  
 Photograph by: Tim Murphy  
 Location: 60316280023--Cook Co.  
 Pullman Sewage Farm  
 ILD 981959208  
 Comments: Picture taken toward  
 the east at sample point  
 X115 in a yard at the  
 corner of South Forestville Avenue  
 and East 133rd Street.





DATE: May 17, 1990

TIME: 10:20 Am

Photograph by:

Greg Dunn

Location: LO316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the west at sample point

X116 near a garden

area.

27



DATE: May 17, 1990

TIME: 11:00 Am

Photograph by:

Greg Dunn

Location: LO316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X117. Taken in a vacant

lot east of Eberhart Avenue

28





DATE: May 17, 1990

TIME: 11:00 am

Photograph by:

Greg Dunn

Location: 20316280023-- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X117 in a vacant lot east

of Eberhart Avenue.

29



DATE: May 17, 1990

TIME: 11:30 am

Photograph by:

Greg Dunn

Location: 20316280023-- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the north at sample point

X118, in a vacant lot

South of 130th Street

30





DATE: May 17, 1990

TIME: 11:30 AM

Photograph by:

Greg Dunn

Location: L0316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the southeast at sample

point X 118. Concordia Park

Apartments are in the

background

31



DATE: May 17, 1990

TIME: 12:10 pm

Photograph by:

Greg Dunn

Location: L0316280023 -- Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward

the southeast at sample

point X 119 in the backyard

of a vacant house off of

Prairie and 134th Streets

32





DATE: May 17, 1990

TIME: 12:10 pm

Photograph by:

Greg Dunn

Location: 20316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward  
the west at sample point  
X119 in the backyard of a  
vacant house on the corner of  
Prairie and 134th Streets.

33



DATE: May 17, 1990

TIME: 12:30 pm

Photograph by:

Greg Dunn

Location: 20316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward  
the north at sample point  
X120 just north of  
134th Street

34





DATE: May 17, 1990

TIME: 12:30 pm

Photograph by:

Greg Dunn

Location: 40316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward  
the west at sample point  
X120. Sample taken just  
north of 134th Street.

35



DATE: May 17, 1990

TIME: 12:30 pm

Photograph by:

Greg Dunn

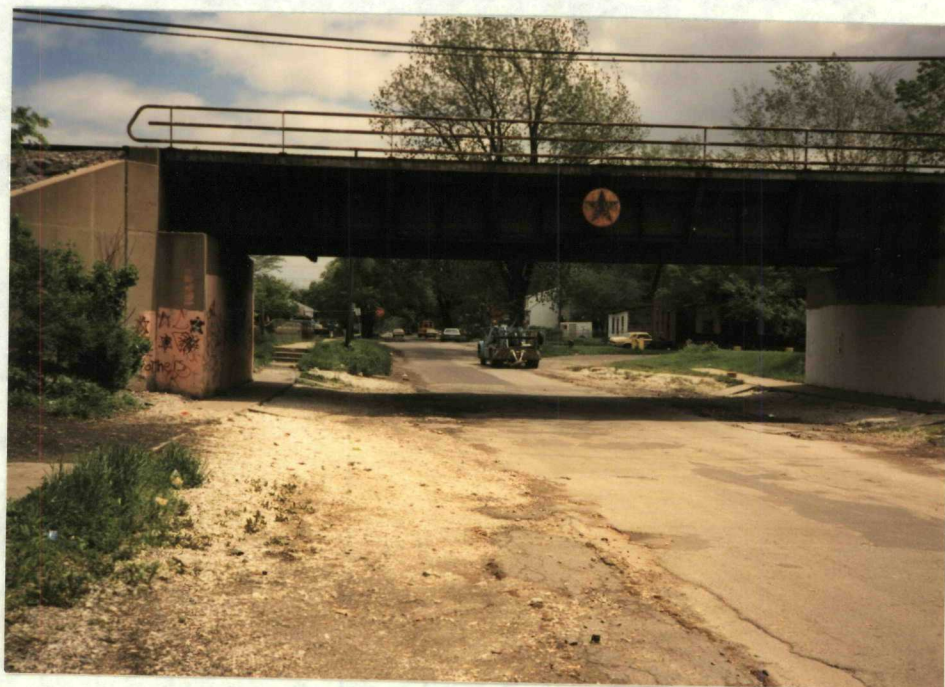
Location: 40316280023--Cook Co.

Pullman Sewage Farm

ILD 981959208

Comments: Picture taken toward  
the east from sample  
point X120 at Chicago  
and Western Indiana Railroad  
tracks

36



APPENDIX F

WELL LOGS



White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 6 in. Depth 390 ft.  
Curb material ☐ Buried Slab: Yes ☐ No ☒  
b. Driven ☐ Drive Pipe Diam. 6 in. Depth 82 ft.  
c. Drilled ☐ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout: ☐

(KIND)	FROM (FT.)	TO (FT.)

### 2. Distance to Nearest:

Building 19 Ft. Seepage Tile Field City Sewer  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) 55  
Septic Tank ☐ Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed January 2, 1976

5. Permanent Pump Installed? Yes ☒ Date 1/14/76 No ☐

Manufacturer Reda Type Sub Location ☐

Capacity 18 gpm. Depth of Setting 315 Ft.

6. Well Top Sealed? Yes ☐ No ☐ Type ☐

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Williams Model Number 6666 Wedge ☐ on type ☐

How attached to casing? Clamp on type

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 60 gal. Type Buried

Location At well

11. Water Sample Submitted? Yes ☒ No ☐

REMARKS:

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner TOM CLARK Well No. 1

Address 14900 Woodlawn Ave. Dolton, Ill.

Driller J.R. STINNETT License No. 102-106

11. Permit No. 43221 Date Nov. 20, 1975

12. Water from Limestone 13. County Cook

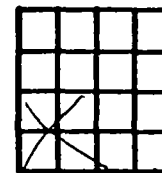
Formation Limestone

at depth 82 to 390 ft. Sec. 11

14. Screen: Diam. ☐ in. Twp. 36N

Length: ☐ ft. Slot ☐ Rge. 14E

Elev. ☐



### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>6"</u>	<u>Galv. Steel 19#</u>	<u>0</u>	<u>82</u>

SHOW  
LOCATION IN  
SECTION PLAT  
lot 5 Bernhard Ingel's Subd  
SW

16. Size Hole below casing: 5 5/8 in. (Swimming pool & lawn irrig)

17. Static level 77 ft. below casing top which is 18 ft.  
above ground level. Pumping level 275 ft. when pumping at 15  
gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Top soil mostly black dirt</u>	<u>6"</u>	<u>6"</u>
<u>Sand very dry and brown</u>	<u>11</u>	<u>12</u>
<u>Yellow clay</u>	<u>59</u>	<u>71</u>
<u>Blue clay and hardpan</u>	<u>8</u>	<u>79</u>
<u>Gravel mixed with silty clay</u>	<u>3</u>	<u>82</u>
<u>Limestone</u>	<u>308</u>	<u>390</u>
<u>Bedrock at 82 ft.</u>		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED J.R. Stinnett DATE May 19, 1980

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
None		

## 2. Distance to Nearest:

Building 10 Ft. Seepage Tile Field ☐  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) 75  
Septic Tank ☒ Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

## 3. Is water from this well to be used for human consumption?

Yes ☒ No ☐

## 4. Date well completed Sept. 10, 1969

5. Permanent Pump Installed? Yes ☒ No ☐  
Manufacturer Jacuzzi Type Hy-Gem  
Capacity 5 gpm. Depth of setting 190 ft.

6. Well Top Sealed? Yes ☒ No ☐

7. Pitless Adaptor Installed? Yes ☒ No ☐

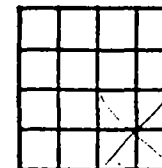
8. Well Disinfected? Yes ☒ No ☐

9. Water Sample Submitted? Yes ☐ No ☒

## REMARKS:

# GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Andrew Droug Well No. 156  
Address Riverside Dr. St. Margaret, Ill.  
Driller H. Holleman License No. 401  
11. Permit No. 5135 Date Aug 18, 1969  
12. Water from limestone 13. County Cook  
at depth 65 to 198 ft. Sec. 9  
14. Screen: Diam.  in. Twp. 36N  
Length:  ft. Slot  Rge. 14E  
Elev.



## 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Standard Steel	0	59
	Galv. pipe 15 lbs		
	per ft.		

SHOW LOCATION IN SECTION PLAT  
Lot 6 in Verhuren's sub  
in SE

16. Size Hole below casing: 5 in.  
17. Static level 38 ft. below casing top which is 1 ft. above ground level. Pumping level 165 ft. when pumping at 5 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil	1	1
Yellow-Clay	18	19
Blue-Clay	40	59
Sand & Gravel	6	65
Limestone	133	198

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED H. Holleman DATE Sept. 11, 1969

White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 5 in. Depth 343 ft.  
Curb material ☐ Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)
Cuttings		

### 2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) ☐  
Septic Tank ☐ Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☐ No ☒

4. Date well completed Aug 1984

5. Permanent Pump Installed? Yes ☐ Date ☐ No ☒

Manufacturer ☐ Type ☐ Location ☐

Capacity ☐ gpm. Depth of Setting ☐ Ft.

6. Well Top Sealed? Yes ☐ No ☐ Type ☐

7. Pitless Adapter Installed? Yes ☐ No ☐

Manufacturer ☐ Model Number ☐

How attached to casing? ☐

8. Well Disinfected? Yes ☐ No ☐

9. Pump and Equipment Disinfected? Yes ☐ No ☐

10. Pressure Tank Size ☐ gal. Type ☐

Location ☐

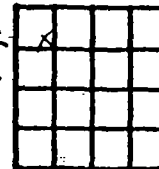
11. Water Sample Submitted? Yes ☐ No ☐

REMARKS:

Observation Well #9

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Metropolitan Sewerage Well No. 9-0  
Address 180 E. Erie St. Chicago  
Driller Phil Knerum License No. 102-84  
11. Permit No. 1125853 Date 5-25-84  
12. Water from Rock Formation  
at depth ☐ to ☐ ft. Sec. 3.19  
13. County Cook  
14. Screen: Diam. ☐ in. Twp. 36 N  
Length: ☐ ft. Slot ☐ Rge. 14 E  
Elev. ☐



SHOW  
LOCATION IN  
SECTION PLAT  
SE NW NW

### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Sch 40	0	67

16. Size Hole below casing: 4 3/4 in.

17. Static level ☐ ft. below casing top which is 1 ft.  
above ground level. Pumping level ☐ ft. when pumping at ☐  
gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Fill & Clay	0	67
Rock	67	343

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Phil Knerum DATE 11-16-84

# INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

### 2. Distance to Nearest:

Building  Ft. Seepage Tile Field   
Cess Pool  Sewer (non Cast iron)   
Privy  Sewer (Cast iron)   
Septic Tank  Barnyard   
Leaching Pit  Manure Pile

3. Well furnishes water for human consumption? Yes ☐ No ☒

4. Date well completed 11-4-75

5. Permanent Pump Installed? Yes ☐ Date  No ☒

Manufacturer  Type  Location

Capacity  gpm. Depth of Setting  Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type

7. Pitless Adapter Installed? Yes ☐ No ☒

Manufacturer  Model Number

How attached to casing?

8. Well Disinfected? Yes ☐ No ☒

9. Pump and Equipment Disinfected? Yes ☐ No ☒

10. Pressure Tank Size  gal. Type

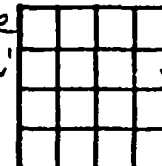
Location

11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner American Oil Co. Well No. Schmidt Engineering  
Address 5216 So. Seminole, Bartlesville, OK.  
Driller Sharpe License No. 102-177  
11. Permit No. 421683 Date 11-11-75  
12. Water from No WATER 13. County Creek  
Formation   
at depth  to  ft. Sec. 21e  
14. Screen: Diam.  in. Twp. 31N  
Length:  ft. Slot  Rge. 14E  
Elev.



SHOW  
LOCATION IN  
SECTION PLAT  
SE 31 NE

### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
8"	#200 H.C.	0	135

16. Size Hole below casing: 8" in.

17. Static level  ft. below casing top which is  ft.  
above ground level. Pumping level  ft. when pumping at   
gpm for  hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
0-4 Sand		
4-11 Clay Clay		
11-18 Sand		
18-25 Clay		
25-32 Clay gravel		
32-42 Clay - Sand		
42-66 Sand Clay		
66-80 Clay Clay		
80-86 Sand gravel		
86-90 Sand		
90-98 Sand - gravel		
98-103 gravel		
103-118 Sand fine		
118-120 Clay Clay - gravel		
120-136 Sand fine		
136-280 Sandstone		
280-420 gray shale / streaks of limestone		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frank Sharpe DATE 2-18-80

White Cop. Ill. Dept. Public Health  
Yellow Cop. - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REGISTERED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

1/67

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug \_\_\_\_ Bored \_\_\_\_ Hole Diam. \_\_\_\_ in. Depth \_\_\_\_ ft.  
Curb material \_\_\_\_ Buried Slab: Yes \_\_\_\_ No \_\_\_\_
- b. Driven ☒ Drive Pipe Diam. 16 in. Depth 60.25 ft.
- c. Drilled ☒ Finished in Drift \_\_\_\_ In Rock X-1684  
Tubular \_\_\_\_ Gravel Packed \_\_\_\_
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Formix A cement	614.0	surface

### 2. Distance to Nearest:

Building 200 Ft. Seepage Tile Field \_\_\_\_  
Cess Pool \_\_\_\_ Sewer (non Cast iron) \_\_\_\_  
Privy \_\_\_\_ Sewer (Cast iron) \_\_\_\_  
Septic Tank \_\_\_\_ Barnyard \_\_\_\_  
Leaching Pit \_\_\_\_ Manure Pile \_\_\_\_

### 3. Is water from this well to be used for human consumption?

Yes \_\_\_\_ No ☒

### 4. Date well completed 1/10/68

5. Permanent Pump Installed? Yes \_\_\_\_ No ☒  
Manufacturer \_\_\_\_ Type \_\_\_\_  
Capacity \_\_\_\_ gpm. Depth of setting \_\_\_\_ ft.

6. Well Top Sealed? Yes ☒ No \_\_\_\_

7. Pitless Adaptor Installed? Yes \_\_\_\_ No ☒

8. Well Disinfected? Yes ☒ No \_\_\_\_

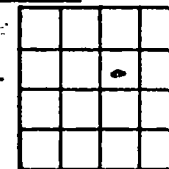
9. Water Sample Submitted? Yes ☒ No \_\_\_\_

(to State Water Survey)

REMARKS:

## GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 3942 Year 1967
11. Property owner Metropolitan Sanitary Dist Well No. TW  
Address Columet Treatment Plant, Chicago  
Driller Layne Western Co. License No. 1A
12. Water from Formations tested 13. County Cook  
Formation  
at depth \_\_\_\_ to \_\_\_\_ ft. Sec. 27.4  
14. Screen: Diam. \_\_\_\_ in. Twp. 32N  
Length: \_\_\_\_ ft. Slot \_\_\_\_ Rng. 14E  
Elev. \_\_\_\_



### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
16	Steel - std	+1	60.25
12	Steel 49.56#	+1	614.0

SHOW LOCATION IN SECTION PLAT

Permit: 2960 N. 2000'  
of SW/c

16. Size Hole below casing: 12 in.

17. Static level \_\_\_\_ ft. below casing top which is 1 ft. above ground level. Pumping level \_\_\_\_ ft. when pumping at \_\_\_\_ gpm for \_\_\_\_ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Drift	55	55
Silurian limestone	435	490
Maquoketa shale	116	606
Galesburg - Platteville	323	929
St. Peter sandstone	86	1015
Prarie du Vion	196	1209
Triumph/200	165	1374
Franciscan	124	1498
Galesville	179	1668
Excelsior	16	1684 TO
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Greg Buffington DATE 1/17/68

White Copy - Public Health  
 Yellow Copy - Well Contractor  
 Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUIRED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 818, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 8 in. Depth 1125 ft.  
 Curb material ☐ Buried Slab: Yes ☐ No ☐  
 b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.  
 c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
 Tubular ☐ Gravel Packed ☐  
 d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
<u>Cement</u>	<u>0</u>	<u>85</u>

### 2. Distance to Nearest:

- Building ☐ Ft. Seepage Tile Field ☐  
 Cess Pool ☐ Sewer (non Cast iron) ☐  
 Privy ☐ Sewer (Cast iron) ☐  
 Septic Tank ☐ Barnyard ☐  
 Leaching Pit ☐ Manure Pile ☐

### 3. Is water from this well to be used for human consumption?

Yes ☒ No ☐

### 4. Date well completed 8-28-72

### 5. Permanent Pump Installed? Yes ☒ No ☐

Manufacturer Barnes 40hp Type Sub. turbine  
 Capacity 200 gpm. Depth of setting 460 ft.

### 6. Well Top Sealed? Yes ☒ No ☐

### 7. Pitless Adapter Installed? Yes ☒ No ☐

### 8. Well Disinfected? Yes ☒ No ☐

### 9. Water Sample Submitted? Yes ☐ No ☒

REMARKS: Truck Wash

owner instructed

IDPH 4.065  
10/68

25,000 gpd

10. Property owner C. I. D. Corp. Well No. Truck Wash.  
 Address 1384 Calumet & Cyprian Chicago Ill  
 Driller K+K Paul License No. 92-518  
 11. Permit No. 19364 Date 8-8-72  
 12. Water from St Peter Sandstone 13. County Cook  
 at depth 300 to 1125 ft. Sec. 36.70  
 14. Screen: Diam. ☐ in. Twp. 37N  
 Length: ☐ ft. Slot ☐ Rge. 14E  
 Elev. 593


### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>12"</u>	<u>Galv. 36 lb.</u>	<u>0</u>	<u>85</u>
<u>8"</u>	<u>" 26 "</u>	<u>85</u>	<u>698</u>

SHOW  
LOCATION IN  
SECTION PLAT

S30°NW SW  
300' N 700' E SW 1/4

16. Size Hole below casing: 8 in.  
 17. Static level 300 ft. below casing top which is 1 ft.  
 above ground level. Pumping level 460 ft. when pumping at 200  
 gpm for 12 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Overburden</u>	<u>0</u>	<u>85</u>
<u>Rock formation</u>	<u>85 to</u>	<u>450</u>
<u>Shale</u>	<u>450</u>	<u>665</u>
<u>Rock</u>	<u>665</u>	<u>990</u>
<u>St Peter Sandstone</u>	<u>990</u>	<u>1125</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Paul Kneiser DATE 10-26-72

K+K Well Drilling

Corrections from RTS - 2/1974

White Copy - Public Health  
 Yellow Copy - Well Contractor  
 Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug       . Bored       . Hole Diam. 6 in. Depth 450 ft.  
 Curb material       . Buried Slab: Yes        No         
 b. Driven       . Drive Pipe Diam.        in. Depth        ft.  
 c. Drilled X. Finished in Drift       . In Rock X.  
 Tubular       . Gravel Packed       .  
 d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

### 2. Distance to Nearest:

Building 10 Ft. Seepage Tile Field 75  
 Cess Pool        Sewer (non Cast iron)         
 Privy        Sewer (Cast iron)         
 Septic Tank 50 Barnyard         
 Leaching Pit        Manure Pile       

3. Well furnishes water for human consumption? Yes X No       

4. Date well completed 6/27/78

5. Permanent Pump Installed? Yes        Date        No X

Manufacturer        Type        Location         
 Capacity        gpm. Depth of Setting        Ft.

6. Well Top Sealed? Yes X No        Type       

7. Pitless Adapter Installed? Yes        No       

Manufacturer        Model Number         
 How attached to casing?       

8. Well Disinfected? Yes X No       

9. Pump and Equipment Disinfected? Yes        No       

10. Pressure Tank Size        gal. Type         
 Location       

11. Water Sample Submitted? Yes        No       

REMARKS:

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Land and Lakes Co. Well No.       

Address 123 N. Northwest Hwy. Park Ridge, Ill

Driller W. E. Wehling License No. 102-2

11. Permit No. 75892 Date 6/21/78

12. Water from        13. County Cook

Formation         
 at depth        to        ft. Sec. 35.62

14. Screen: Diam.        in. Twp. 37N

Length:        ft. Slot        Rge. 14E

105'N & 1475' E of SW of Above Elev.       

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6	galv. seamless	+1	60

SHOW LOCATION IN SECTION PLAT  
105'N, 1475'E, 34 1/2  
 (Industrial - drinking + sanitary purposes in conj. w/ commercial operation.)

16. Size Hole below casing:        in.

17. Static level        ft. below casing top which is        ft. above ground level. Pumping level        ft. when pumping at        gpm for        hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Drift	59	59
Lime	361	420
Lime & Shale	20	440
Shale	10	450

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

Wehling Well Works, Inc.

SIGNED W. E. Wehling DATE 7/7/78

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 8 in. Depth 1021 ft.  
Curb material ☐ Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
- c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

### 2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) ☐  
Septic Tank ☐ Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

### 3. Is water from this well to be used for human consumption?

Yes ☐ No ☒

### 4. Date well completed March 23, 1967

5. Permanent Pump Installed? Yes ☒ No ☐  
Manufacturer Red Jacket Type Submersible  
Capacity 75 gpm. Depth of setting 690 ft.

6. Well Top Sealed? Yes ☒ No ☐

7. Pitless Adaptor Installed? Yes ☐ No ☒

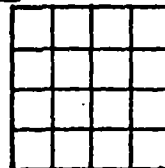
8. Well Disinfected? Yes ☐ No ☒

9. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

## GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 1948 Year 1966
11. Property owner Bonell Mfg. Co. Well No.    
Address 13521 S. Halsted St. Chicago, Ill.  
Driller Wehling Well Works, Inc. License No. 92-56
12. Water from   Formation   13. County Cook  
at depth   to   ft. Sec. 32  
14. Screen: Diam.   in. Twp. 37N  
Length:   ft. Slot   Rng. 14E  
Elev.



### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
8"		0	71
6"		455	576 1/2

SHOW  
LOCATION IN  
SECTION PLAT

16. Size Hole below casing: 5 1/2 in.

17. Static level   ft. below casing top which is   ft.  
above ground level. Pumping level   ft. when pumping at    
gpm for   hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Mud	20	20
Sandy Mud	35	55
Lime	400	455
Shale	110	565
Lime	325	890
Sand	124	1014
Shale	7	1021
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED

H. E. Kehring

DATE 3-31-67



FILL IN ALL PERTINENT INFORMATION FURNISHED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 6206, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

1/67

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
 Curb material  Buried Slab: Yes ☐ No ☐  
 b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
 c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
 Tubular ☐ Gravel Packed ☐  
 d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
50% Pozmix	558	Surface

## 2. Distance to Nearest:

Building 300' Ft. Seepage Tile Field —  
 Cess Pool — Sewer (non-Cast iron) 150'  
 Privy — Sewer (Cast iron) —  
 Septic Tank — Barnyard —  
 Leaching Pit — Manure Pile —

## 3. Is water from this well to be used for human consumption?

Yes ☐ No ☒

## 4. Date well completed Dec. 16, 1967

5. Permanent Pump Installed? Yes ☐ No ☒  
 Manufacturer  Type   
 Capacity  gpm. Depth of setting  ft.

6. Well Top Sealed? Yes ☒ No ☐

7. Pitless Adaptor Installed? Yes ☐ No ☒

8. Well Disinfected? Yes ☒ No ☐

9. Water Sample Submitted? Yes ☒ No ☐

REMARKS: Test well for Chicago Deep Tunnel Project

# GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 3943 Year 1967  
 11. Property owner Chicago Sanitary District Well No. SW-1  
 Address N. part of Canal at Blue Island Locks  
 Driller Chicago Sanitary District License No. 14  
 12. Water from Eureka Formation 13. County Cook  
 at depth 546.5 to 876 ft. Sec. 32  
 14. Screen: Diam.  in. Twp. 37N  
 Length:  ft. Slot  Rng. 14E  
 Elev.


## 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>12"</u>	<u>Steel</u>	<u>0</u>	<u>60.0</u>
<u>8"</u>	<u>Steel 24.7#</u>	<u>0+</u>	<u>558.0</u>

SHOW LOCATION IN SECTION PLAT

Permit: 2370'S,  
18 30'E of  
1-1 NW 1/4

16. Size Hole below casing: 8 in.  
 17. Static level 460 ft. below casing top which is 1-1 NW 1/4 ft. above ground level. Pumping level  ft. when pumping at  gpm for  hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Drift</u>	<u>39.5</u>	<u>39.5</u>
<u>Shale and Lime</u>	<u>30.5</u>	<u>70.0</u>
<u>Silurian Limestone</u>	<u>360.0</u>	<u>430.0</u>
<u>Maquoketa Shale</u>	<u>116.5</u>	<u>546.5</u>
<u>Eureka - Platerville</u>	<u>329.5</u>	<u>876.0</u>
<u>St. Peter</u>	<u>876</u>	<u>888</u>
<u>(Backfilled with Cat-Seal to 873)</u>		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Greg B. Bunting DATE 12/22/67

White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTION 3 DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 5 in. Depth 210 ft.  
Curb material ☐ Burled Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)
Cuttings		

### 2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field 75'  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) ☐  
Septic Tank 50 Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

### 3. Well furnishes water for human consumption? Yes ☒ No ☐

### 4. Date well completed 12-20-78

5. Permanent Pump Installed? Yes ☒ Date 3-7-79 No ☐  
Manufacturer Red Rock Type SUB Location Well  
Capacity ☐ gpm. Depth of Setting 140 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type CAP

7. Pitless Adapter Installed? Yes ☒ No ☐  
Manufacturer Williams Model Number BS0AC

How attached to casing? Bolted

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 40 gal. Type ☐  
Location Basement

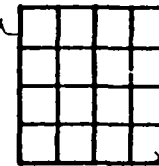
11. Water Sample Submitted? Yes ☐ No ☒

### REMARKS:

#11 owner instructed  
to do so

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Brenda Brooks Well No.       
Address 1750 E. 134th Place Chicago, IL  
Driller Phil Knierim License No. 170284  
11. Permit No. 82956 Date December 14, 1978  
12. Water from Rock 13. County COOK  
at depth 40 to 210 ft. Sec. 34.1a  
14. Screen: Diam. ☐ in. Twp. 34N  
Length: ☐ ft. Slot ☐ Rge. 4E  
Elev. ☐



SHOW  
LOCATION IN  
SECTION PLAT  
Lot 19, Maryland Subd.  
SESESE

### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>5"</u>	<u>Black 15#</u>	<u>0</u>	<u>45</u>

16. Size Hole below casing: 5 in.

17. Static level 140 ft. below casing top which is 1 ft.  
above ground level. Pumping level 140 ft. when pumping at 10  
gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Top Soil</u>	<u>0</u>	<u>3</u>
<u>Clay</u>	<u>3</u>	<u>45</u>
<u>Rock</u>	<u>45</u>	<u>210</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Phil Knierim DATE March 7, 1979